SOUTH MARKETING ISSUE
Pages 9-16

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USDA Establishes Research Groups For Pioneer Work

Mineral Nutrition, Plant Physiology Labs in Operation

WASHINGTON—Progress in setting up special pioneering research groups, to explore the scientific unknown beyond the present limits of knowledge, was reported Nov. 22 by the U.S. Department of Agriculture.

These new units for basic research, organized around outstanding scientists, are being established in various divisions of USDA's Agricultural Research Service. Plans for them began to take shape as early as last April, following a realignment of functions within the service. A memorandum explaining the purpose of the new pioneering research groups was sent to division directors by B. T. Shaw, USDA research administrator, on May 17 this year.

So far, two of these laboratories are in full operation. They are the pioneering laboratory for mineral nutrition, in the Soil and Water Conservation Research Division, and the pioneering laboratory for plant physiology, in the Crops Research Division. Both are located at USDA's Agricultural Research Center, Beltsville, Md.

Charters have been approved for three additional laboratories, also located at Beltsville. They are the pioneering laboratory for blood antigen research, in the Animal Husbandry Research Division, and pioneering laboratories for insect

(Continued on page 21)

Potash Firms Continue National Plant Food Institute Membership

WASHINGTON — All six of the potash firms who resigned from the National Plant Food Institute last June (Croplife, June 17, page 1) are planning to continue their NPFI membership or have already notified the Institute to that effect, according to a Croplife survey made last week. All the actions were made on an individual company basis, it was noted.

Potash companies retaining their membership in the Institute are:

American Potash & Chemical Corp., Los Angeles; Duval Sulphur & Potash Co., Houston; National Potash Co., New York; Potash Company of America, Carlsbad, N.M.; and Southwest Potash Corp., New York.

An official of the sixth company, United States Potash Co., division of U.S. Borax & Chemical Corp., New York, stated that recommendations are being made to chief executives of the parent corporation, to retain membership in the Institute, with indications of favorable action anticipated.

These firms had disapproved of the dues structure adopted last June by NPFI at its annual meeting to cover the costs of the expanded educational and promotion program now under way by the Institute. The resignations had never been "accepted" by the NPFI, however, but were held in abeyance pending study by a special dues committee. Meanwhile, the potash firms had considered themselves on an inactive status as far as NPFI affairs were concerned.

A readjustment of the dues structure was recommended by the special committee and approved by the NPFI board at a meeting in Atlanta Nov. 1. Subsequently, John A. Miller, president of the Institute, wrote each of the inactive potash companies informing them of the board action and issuing invitations to return to active participation in the NPFI.

All of the potash companies contacted by Croplife indicated the new dues structure appeared to be an improvement over the original plan and was the main reason for their agreeing to continue memberships on an active basis.

Judging from the opinions expressed to Croplife, actions by the potash companies were entirely on an individual basis. At least two of the firms voiced strong support of a proposal which would set up only mixed fertilizer manufacturers as voting members of the NPFI. "This will organize Institute membership as an association with mixed goods manufacturers as basic membership," they say, and suppliers and allied trades suppliers of ingredients and allied trades as associate members.

Commenting on these developments, John A. Miller, Price Chemical Co., Louisville, president of the National Plant Food Institute, said:

"We are most happy to again welcome the potash producers to membership in the Institute. These potash companies and their personnel are essential to the success of all programs of the Institute and now with a united front we can move forward more effectively with the greatly needed expansion of research and educational programs so essential to the future success of the fertilizer industry."

OHIO INSTITUTE SAYS . . .

Pesticides Important in Successful Farm Operation

COLUMBUS, OHIO — One of the largest crowds in the history of the Ohio Pesticide Institute attended the winter meeting sparked by highly controversial issues stemming from man's fight against diseases and insects.

Some 130 chemical company representatives and researchers jammed the session room in the Neil House Nov. 20 and 21 to hear 30 speakers talk on subjects ranging from gibberellic acid's use in farming to tolerance levels of chemicals.

R. E. Althaus of Merck and Company, Rahway, N.J., forecast that gibberellic acid, the plant growth promoter, will "take its place along with insecticides and fungicides as tools of agriculture." Some of the most outstanding effects have been in cotton fields, where production has been increased by 2 to 3 more bolls per plant—or a half bale more an acre. The chemical has also shown promise of increasing the yield of celery. "It is this aspect of gibberellic acid—its ability to promote vegetable growth —that is most striking," Mr. Althaus said.

In floricultural use, the acid has prolonged blooming of geraniums by two weeks, and speeded up the blooming of hydrangeas. It increases the berry size of grapes, speeds up potato sprouting in the soil, Mr. Althaus said. Beans, corn and other crops push through the ground more quickly when seeds are treated with gibberellic acid, he added.

In soybeans, experimenters have found that the pods set higher on the stalk so that the 2-5 bushels an acre, usually left behind in harvesting, are saved.

The Miller Bill, which sets tolerance levels on agricultural products, has made a great impact on agriculture. This was the statement of Samuel Alfend, chief of the Cincinnati District of the Food and Drug Administration.

The man in charge of FDA work in Ohio, Kentucky, Michigan and In-

(Continued on page 4)

Eastern Entomologists Hear Talks on Pros and Cons of Mass Insect Control Programs

By GEORGE W. POTTS and JAMES W. MILLER
Croplife Staff

NEW YORK—Mass control of insect pests requires close teamwork and understanding among federal, state and local governments as well as various cooperating agencies within these governments, according to a panel of regulatory officials at the annual meeting of the Eastern Branch of the Entomological Society of America here Nov. 25-26.

The pros and cons of mass insect control such as the recent gypsy moth spray program were aired by three government representatives. Emory D. Burgess, director of the plant pest control division, USDA, Washington, gave the objectives and accomplishments of mass control; Neely Turner, chief entomologist, Connecticut Agricultural Experiment Station, New Haven, presented a different appraisal of the program to eradicate the gypsy moth, and Paul F. Springer, fish and wildlife service, U.S. Department of Interior, Laurel, Del., spoke on the effects of mass spray programs on fish and wildlife.

"What shall we do when a plant pest of foreign origin is discovered in this country?" Mr. Burgess asked. "Should we sit back and let nature take its course until we have full information concerning the biology and control of the pest? Should we wait and see, knowing full well from foreign literature or from professional observations overseas the pest has serious potentialities? Or should we pool all the knowledge we can obtain and

(Continued on page 8)

Inside You'll Find

Patents and Trademarks 6
Over the Counter 9
What's New 10
Weed of the Week 16
Editorials 22
Meeting Memos 23
Index of Advertisers 23

Cooperative to Build $50,000 Fertilizer Plant in Idaho

PORTLAND, ORE. — The Pacific Cooperatives will build a new fertilizer plant near Blackfoot, Idaho. Newell Dickson, crop production and soil management specialist, said that equipment has been moved to the site of operations and preliminary construction work is under way.

Estimated cost of the plant is $50,000. It will be built on a tract of land between the Snake River and Heyburn. Easements were approved by the Idaho State Land board. Plant facilities will first be installed for aqua-ammonia production and will expand to produce other products.

Weed Society Program to Stress Fundamental Research

WASHINGTON — "Fundamental Research in Weed Control" will be the theme of the general session at the second meeting of the Weed Society of America, it has been announced by Dr. W. B. Ennis, Jr., society president. The society will meet Jan. 13-15, 1958, at the Hotel Peabody, Memphis.

Host to the meeting will be the Southern Weed Conference whose annual meeting will be held Jan. 16, following the Weed Society of America's meeting.

Leading authorities from three nations will discuss various phases of weed control at the opening sessions of the society meeting the morning of Jan. 13.

Following the presidential address by Dr. Ennis, who is acting chief of the Crops Protection Research Branch, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md., will be Dr. W. E. Loomis, department of botany, Iowa State College, Ames, Iowa, who will discuss "The Role of Basic Research in Weed Control." Dr. H. L. Haller, assistant to the administrator, Agricultural Research Service, USDA, Washington, D.C., will speak on "The Impact of the Miller Bill (Public Law 518) on Research and Development of Herbicides and Recommendations for Their Use in Crops."

Rounding out the morning's general session will be a report on "The Role of Industrial Research and Development in Weed Control in Europe" by Dr. E. Holmes, plant Production, Ltd., research station, Fernhurst, near Haslemere, Surrey, England. He will be followed by Dr. Ewert Aberg, Royal Agricultural College, Institute of Plant Husbandry, Uppsala, Sweden, who will discuss "Problems, Progress, and Organization of Weed Control in Continental Europe."

Dr. Kenneth McFarland, named "America's Number One Speaker" in a survey conducted by the U.S. Chamber of Commerce, will be the guest speaker at a banquet to be held in conjunction with the society meeting the evening of Jan. 14. Dr. McFarland is a guest lecturer for General Motors Corp. and lives on a farm near Topeka, Kansas.

Sectional meetings are planned for the second and third days of the meeting to discuss various phases of weed control. Subject of the sectional meetings will be the control of weeds in agronomic and horticultural crops, the control of weeds in woody plants in pastures, range lands, forests, right-of-ways, and other areas, control of weeds in turf and weed control teaching and extension.

Other subjects for sectional meetings will be the control of aquatic weeds and the public health, regulatory and ecological, physiological and edaphic aspects of weed control.

The Weed Society of America, founded Dec. 8, 1954, was formed to encourage and promote the development of knowledge concerning weeds and their control through publishing research findings, fostering high standards of education, encouraging effective regulation and promoting unity in all phases of weed work.

In addition to Dr. Ennis, other officers of the society are: Dr. A. S. Crafts, University of California, Davis, Cal., vice president; W. C. Shaw, Crops Research Division, ARS, USDA, Beltsville, Md., secretary; and Dr. W. C. Jacob, University of Illinois, Urbana, Ill., treasurer and business manager.

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Oregon Sales Dip In Third Quarter

PORTLAND, ORE.—Sale of fertilizers was down in Oregon for the third quarter of 1957, according to the report of J. D. Patterson, chief chemist for the State Department of Agriculture. Fertilizer sales dropped to 27,653 tons during the third quarter of 1957, compared with 45,024 tons sold during the same time in 1956.

Record breaking sales during the first six months of this year kept the total for the first nine months of 1957 higher than the figure recorded at the same time during 1956.

A definite decrease was noted in the sale of agricultural minerals. At the end of the third quarter in 1956, a total of 16,715 tons of gypsum soil sulfur and other minerals had been sold compared with only 13,789 tons for the same period this year.

Pacific Co-op Changes Name; Makes Plans for Expansion Program

PORTLAND, ORE.—Pacific Supply Co-operative, 23-year-old farmer-owned distribution group, at its 24th annual meeting here, announced a change in name and a new trademark identification as part of an aggressive program for rapid expansion of its already large sales volume.

From now on the name will be Pacific Cooperatives, Charles Baker, Walla Walla, general manager, told some 500 Northwest farmers and cooperative officials.

Mr. Baker said the new name better fits Pacific's status as an organization owned by and serving 125 local associations in Oregon, Washington and Idaho. It will identify local associations as members of the Pacific family with a large blue "P" set off center in red and white circles.

The identification symbol was utilized in an expansive series of advertising campaigns and was presented by the Pacific Cooperatives' advertising agency, Dawson & Turner, Inc., Portland and New York firm.

R. E. Burrows, Walla Walla, was reelected president at a business meeting where James Hill, Jr., was renamed vice president, with Charles Baker, Walla Walla, reelected general manager and secretary.

F. L. Titus, Pullman wheat farmer, was elected to the board of directors, succeeding E. C. Aschenbrenner, Bonners Ferry, Idaho. Reelected directors are Mr. Hill and Mr. Burrows.

The group resolved against a pending freight rate raise and asked that governors of all Pacific Northwest states and California band together to fight it.

Net savings of Pacific Supply Cooperative amounted to $350,840 on total business of $29,463,769, Mr. Baker reported. An additional $160,000 went to local co-ops in the form of wider margins on petroleum products, Mr. Baker said.

Total assets of Pacific increased $1,135,000 to a total of $9,678,000, William G. Stacey, auditor, of Salem reported. Investment in facilities totaled $381,000.

The organization this fall is putting into service the first in a series of combination petroleum and grain transport trucks costing about $40,000 each. This enables Pacific to haul 8,200 gallons of petroleum or liquid fertilizer from Columbia river terminals to inland co-ops.

Walter C. Dutton

RETIRES FROM DOW—Walter C. Dutton, formerly an assistant director of agricultural chemicals research for the Dow Chemical Co., Midland, Mich., and for the past three years serving in a consulting capacity for the firm, has retired. Mr. Dutton spent 21 years with Dow, and was widely known in agricultural circles. He just completed two years as president of the Agricultural Research Institute, an affiliate of the agricultural board of the National Academy of Sciences, National Research Council. In 1954 he was honored by the North Central Weed Control Conference, receiving its honorary membership award for long service, and was the first industry-connected member to receive this award. Mr. Dutton holds science degrees from Ohio State and Michigan State Universities and joined Dow in 1936.

Florida Peanut Allotment Unchanged

GAINESVILLE, FLA. — Florida's 1958 acreage allotment of peanuts for picking and threshing has been set at 54,915 acres by the U.S. Department of Agriculture. This is almost identical with the allotment for 1957, according to O. P. McArthur, state administrative officer with the Agricultural Stabilization and Conservation Committee.

The national allotment of peanuts for harvest next year is 1,610,000 acres, the minimum permitted by law.

In a referendum on Dec. 11, 1956 peanut growers approved marketing quotas and acreage allotments for 1957, 1958 and 1959. Price support will be available at not less than 75% nor more than 90% of parity.

American Potash to Explore Manganese Deposits

LOS ANGELES—American Potash & Chemical Corp. has completed arrangements to conduct exploratory investigations of manganese ore deposits at Batesville, Ark., according to an announcement by Peter Colefax, president.

The deposits are located in 10,700 acres of land near Batesville, approximately 100 miles northeast of Little Rock. Mineral rights to the deposits are held by four Arkansas companies, U.S. Manganese Corp., Arkansas Mining and Exploration Co., Miller-Lipp Corp. and Miller-McGee Manganese Corp.

Under arrangements worked out by Lehman Brothers, New York investment banking firm, American Potash & Chemical Corporation will investigate both the extent of the deposits and processes to recover the manganese. If results of the studies are favorable, present plans include formation of a new company to undertake commercial production, with American Potash holding 55% of the stock.

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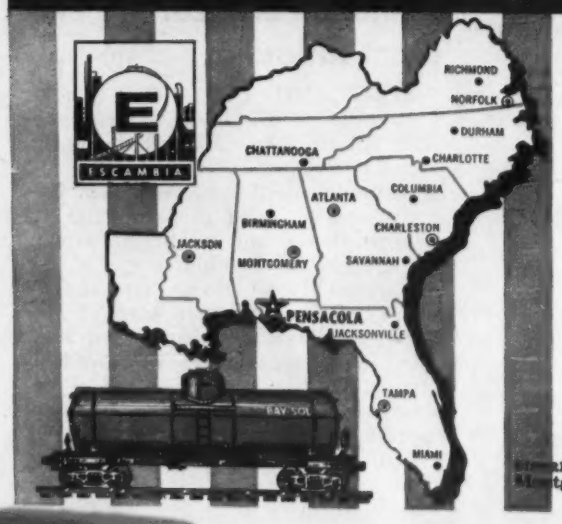

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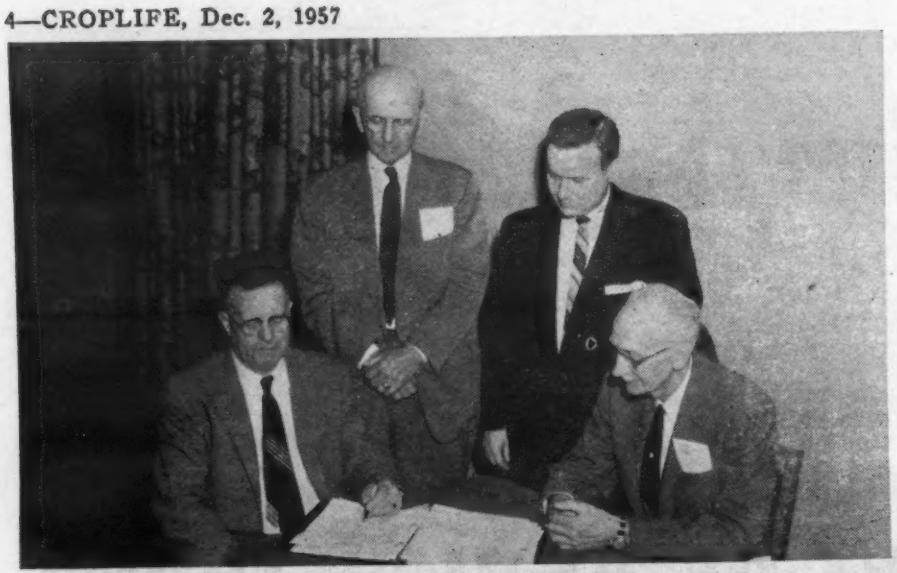

OHIO PESTICIDE INSTITUTE OFFICERS—Officers named at the Nov. 20-21 meeting of the Ohio Pesticide Institute, Columbus, Ohio, are pictured at the meeting. Left to right, they are: Dr. J. D. Wilson, Ohio Agricultural Experiment Station, Wooster, secretary; V. H. Davis, Ohio Farm Bureau, Columbus, treasurer; J. J. Coyle, Jr., Rohm & Haas Co., Cuyahoga Falls, Ohio, 1st vice president; and P. C. Pratt, Leatherman Seed Co., Canton, Ohio, president.

OHIO PESTICIDE INSTITUTE

(Continued from page 1)

diana told why his agency is more strict on the appearance of a pesticide in milk than in any other food. Reasons: milk is widely consumed, comprising about ¼ of the American diet; milk is heavily consumed in its natural state unlike many fruits and vegetables that are pealed or washed, and milk makes up a large part of the diet of infants and invalids.

Rigid tolerances are set up because of the greater susceptibility of men to chemicals as compared to animals, he explained. If, for example a rat is capable of withstanding 10 parts per million of an insecticide, no more than 1 part or less is permitted on farm produce.

In the last FDA milk survey made in Ohio, however, no insecticide or antibiotic was found out of 44 samples, Mr. Alfend reported.

Seizures by the agency in recent years have included spinach, lettuce, wheat, barley, green coffee, peas, beans, corn, and celery where growers had failed to observe dosages or application instructions on the labels for a number of pesticides, Mr. Alfend declared.

The FDA official said that in 195[illegible] he and his co-workers will talk with state extension and research workers to find out where the greatest dangers lie in the use of pesticides. Samples will also be collected at certain farms and a check made to see if spraying schedules are being adhered to.

Use of chemicals in farming was seen as one of the greatest steps forward in modern agricultural history. Dr. H. C. Young, chairman of the department of botany and pathology at the Ohio Agricultural Experiment Station, sees pest control as the answer to people who worry about too little food to feed more and more people in America.

"The emphasis on insect control i[illegible] going to be really something," sai[illegible] Dr. Young. "We are running int[illegible] fantastic increases in yields when w[illegible] control root diseases and nematode[illegible] In strawberries the yield has bee[illegible] upped four times." Dr. J. D. Wilson [illegible] the Ohio station increased eggplan[illegible] yield tremendously by controlling so[illegible] diseases.

Dr. Young launched an attack o[illegible] misleading recommendations comin[illegible] out in the press on the control of tre[illegible] diseases. "We have not found a sys[illegible] temic insecticide that can cure tre[illegible] diseases," he said, "although worker[illegible] are looking for antibiotics that wi[illegible] do the job." A DDT spray that wi[illegible] control the elm beetle is still the bes[illegible] control we have for both Dutch el[illegible] disease and phloem necrosis, said th[illegible] pathologist. He reported a tremen[illegible] dous amount of work is being done i[illegible] the United States, Holland and Eng[illegible] land to find resistance in the Amer[illegible] can elm to Dutch elm disease.

Dramatic increases of spittlebu[illegible] number, doubling and tripling in man[illegible] areas, were reported by C. R. Weaver[illegible] entomologist at the experiment sta[illegible] tion. Although benzene hexachlorid[illegible] is a satisfactory material for its con[illegible] trol, Mr. Weaver says he is forced t[illegible] recommend less effective insecticide[illegible] on forage crops since BHC has no[illegible] yet been approved.

Vivid cases of how BHC passe[illegible] from a cow into her milk were point[illegible] ed out by George Ware of the Woo[illegible] ster station. Working with 10 cow[illegible] at Wooster, he administered BHC a[illegible] rates of 1, 5, 25 and 125 parts pe[illegible] million. Even with such a sma[illegible] amount as 1 part per million, BH[illegible] was detectable in milk from 45 to 5[illegible] days after the last feeding. At th[illegible] highest level, Mr. Ware reported, a[illegible] much as 10 parts per million appea[illegible] ed in milk for as long as 180 days.

Candidates for top positions in con[illegible] trolling certain vegetable insects we[illegible] given by entomologist J. P. Sleesma[illegible] He reported how the cabbage loope[illegible] which has apparently become resis[illegible] ant to DDT, was controlled by Endri[illegible] Dieldrin, heptachlor and aldrin a[illegible] performed well against the cabbag[illegible] maggot when used as granular trea[illegible] ment to the soil, he said. The Mex[illegible] can bean beetle was kept under con[illegible] trol with Sevin and Trithion, r[illegible] larvae appearing on the bean leav[illegible] with either.

Dr. E. K. Alban, OAES horticu[illegible] turist, said we can expect to see ex[illegible] panded use of layby treatments [illegible] vegetable fields to minimize wee[illegible] problems in the harvest period. Th[illegible] two best on potatoes and tomatoes [illegible] his tests were Diuron and GC 260[illegible] Simazin protected potatoes from mo[illegible] common annual weeds for from six [illegible] eight weeks, he reported.

Still the outstanding chemical fo[illegible] battling the Japanese beetle is DD[illegible] according to Dr. J. B. Polivka. H[illegible] has tested it against three othe[illegible]

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hemicals the past two years and it ave the highest per cent of control 98%—on roses. DDT emulsion is ecommended by Dr. Polivka because has more residual action. He got better results applying DDT every- ay than every other day, however.

Another vote was given given to DT in the fight against the corn rworm by Dr. C. R. Neiswander, ead of the OAES entomology depart- ent. He recommended using two to ree pounds of actual material in 25 al. water an acre, applying this three four times. He reported difficulty getting the silk covered with the pray in the leafier strains of corn. We should work on better coverage the silk to get better results," he aid.

D. D. Bondarenko, weed control researcher, reported that of 76 million acres of corn in the United States, 15 million acres are sprayed to control weeds. Still one of the most important chemical tools is 2,4-D. A total of $21 million is spent annually for controlling weeds in corn alone, he said.

P. C. Pratt of the Leatherman Seed o., Canton, Ohio was elected presi- ent, succeeding M. G. Farleman of he Standard Oil Co., Cleveland. ther 1958 officers are: J. J. Coyle, r., Rohm and Haas Co., Cuyahoga alls, first vice president; W. J. lajure, California Spray - Chemical orp., Maumee, second vice president; D. Wilson, OAES plant pathologist, ecretary; V. H. Davis, Ohio Farm ureau, Columbus, Ohio, treasurer; nd H. E. Bennett, Shell Oil Co., usiness manager.

rogram Arranged for innesota Short Course

ST. PAUL, MINN.—The University f Minnesota will be host on Dec. 9, many fertilizer industry people hen the seventh annual soils and rtilizer short course is held at Cof- y Hall auditorium.

Speakers include not only soils and xtension experts from the University taff, but also a speaker from TVA, he National Plant Food Institute, .S. Department of Agriculture, state ontrol officials, the Middle West Soil mprovement Committee, and the in- ustry.

Dr. William P. Martin, head, de- artment of soils, will appear on the orning program, as will A. C. Cald- ell, J. M. MacGregor, and P. M. urson of the University staff. Skuli utford, director of the Minnesota gricultural Extension Service, and herwood Berg, head, department of gricultural economics, will preside t the daytime sessions.

An evening program is also planned, ith speakers listed as W. R. All- etter, vice president, the National lant Food Institute, Washington, .C.; J. C. Engibous, International inerals & Chemical Corp., Skokie, l.; Zenas H. Beers, executive secre- ary, Middle West Soil Improvement ommittee, Chicago; and R. E. Berg- an, director of feed and fertilizer ontrol, Minnesota State Department f Agriculture, St. Paul.

Subjects include a wide scope of echnical and economic discussions egarding soil fertility, methods of lant food application, soil conserva- on, research, fertilizer laws, and inor elements. The sessions begin at a.m. Dec. 9, with registration at offey Hall.

CONSERVATION WINNER

LAFAYETTE, IND.—Max R. chroer, Bowling Green, Clay County armer, is the 1957 state winner in he annual Indiana Soil Conservation ontest. The contest, sponsored by the altimore and Ohio Railroad, is con- ucted annually with the cooperation f the soil conservation service, state oil conservation committee, the state oil conservation districts and the urdue agricultural extension service.

No Weevil Resistance Noted in South Texas

WESLACO, TEXAS — Research work conducted the past season showed that there is no boll weevil resistance in South Texas to the chlorinated hydrocarbons, according to Dr. George P. Wene, former entomologist with the Valley Experiment Station. He is now with the Cotton Research Center at Tempe, Ariz.

Both the chlorinated hydrocarbons and the organic phosphate insecticides prove equally effective, Dr. Wene said. He said he had not seen any failures where applications were high enough and timed properly.

HOPPER DAMAGE

WESLACO, TEXAS—Grasshoppers are rarely a pest under lower Rio Grande Valley conditions but fields of peppers have been damaged by this insect, according to James Deer, associate county agent in entomology.

Ohio Farmers Lose $1.5 Million to Corn Borer Because of 1957 Crop Infestation

COLUMBUS, OHIO—Ohio farmers lost nearly $1½ million to the European corn borer this year, it has been estimated by the Ohio State University extension service. Lyle Goleman, extension entomologist, says that although the pest was not as severe in Ohio as it was last year, the losses due to the insect is still formidable.

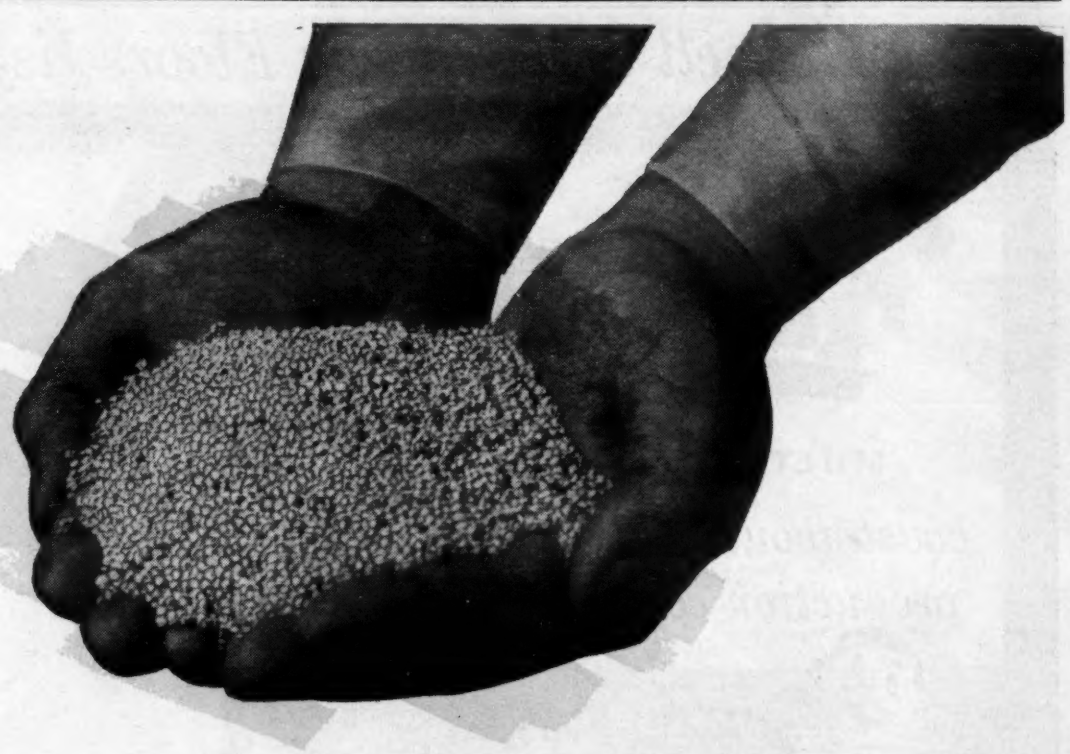
Mr. Goleman's assertion is based on his having made a corn borer survey of some 300 cornfields in the state. The tests, made in cooperation with the agricultural experiment station at Wooster, showed an average of 35.1 borers for each 100 plants, about one-third of a borer per plant. This figure, he pointed out, could be compared to the 53.3 borers for each 100 plants in 1956, or one-half borer per plant.

Researcher Goleman adds that figuring this year's crop loss from corn borers at 1,294,558 bushels and the price of corn at $1.13 a bushel, borers destroyed approximately $1,462,850 worth of corn in Ohio alone. Last year's loss, however, was more than 2½ million.

Borers were apparently more prevalent in the northwest section of the state this year, Mr. Goleman observed. For, in that area, borers numbered 45.4 for each 100 plants, compared to 63.1 for each 100 a year ago.

TO ATLAS POSITION

WILMINGTON, DEL. — The appointment of Theodore P. Malinowski as an assistant director of product development in Atlas Powder Company's chemicals division has been announced. He will head up the exploratory field development and marketing research sections of the department.



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Industry Patents and Trademarks

2,813,777

Process for the Crystallization of Nitrate from a Nitric Acid Solution of Crude Phosphate. Patent issued Nov. 19, 1957, to Gunder Georg Ulrich Wasmuth Swensen, Heroya, near Porgsgrunn, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Oslo, Norway. The process for the crystallization of a salt selected from the group consisting of calcium nitrate tetrahydrate and calcium nitrate-ammonium nitrate decahydrate from a solution of crude calcium phosphate in nitric acid, which comprises cooling the solution to a temperature ranging from 2 to 10 degrees centigrade below its saturation temperature, adding thereto calcium nitrate containing seed crystals, allowing the solution to cool further to yield crystals of which the main body has a grain size less than about 2 mm. and of which at least 80% by weight is of a grain size between 0.5 and 1.5 mm., and separating the crystals from the mother liquor and the finely divided impurities contained therein by straining through a coarse-meshed filtering material.

2,813,851

Organic Separation with Urea and Thiourea. Patent issued Nov. 19, 1957, to Dwight L. McKay, Bartlesville, Okla., assignor to Phillips Petroleum Co. A process for separating organic compounds by the formation of adducts with an amide selected from the group consisting of urea and thiourea in the presence of an amide solvent of greater density than the adduct forming material which process comprises reacting an amide with a stream including adduct forming materials to form crystals of adduct in an adduct forming zone, descending said crystals from the reaction zone to a wash zone wherein the descending crystals are washed by a counter-current flow of amide solvent, withdrawing amide solvent along with unadducted compounds from the top of said wash zone through filters separating the amide solvent from the unadducted compounds, passing the separated amide solvent counter-current to the descending adduct thereby washing the said adduct, descending the adduct crystals into a purification zone wherein the descending adduct is washed by an ascending flow of hot released adducted material thereby removing occluded material from the adduct crystals, removing the said hot released compound along with some amide solvent through a filter near the top of the purification zone, separating the organic compound from the amide solvent, returning the amide solvent to the separation system as wash solvent, descending said crystals from the purification zone to a decomposition zone, supplying heat to said decomposition zone to decompose the adduct and thereby regenerating said amide and releasing adducted material, dissolving said regenerated amide in an amide solvent, withdrawing amide solution along with a large portion of released organic compound through filters separating the solvent containing amide from the organic compound, heating the solvent and returning it to the decomposition zone of the column wherein it contacts adduct crystals thereby causing them to decompose, withdrawing a large portion of released organic compound as hereinbefore stated, passing the remainder of said released material counter-current to the descending adduct as internal reflux whereby occluded material is removed from the said descending adduct.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act a fee of $25 must accompany each notice of opposition.

P.M.P., in capital letters, for insecticides, rodenticides, and germicides. Filed Jan. 28, 1957, by Doncc Inc., Englewood, Col. First use Nov. 29, 1956.

Fungitrol, in capital letters, for fungicides for use in agriculture as well as in a number of industrial applications. Filed March 12, 1957 by Heyden Newport Chemical Corp. New York. First use July 16, 1956.

Elephant Brand, in capital letters for chemical fertilizers. Filed Nov. 1 1956, by the Consolidated Mining and Smelting Co. of Canada, Ltd., Montreal, Quebec, Canada. First use 1932 in commerce, 1932.

Re-Nu, in hand-lettered design, for plant nutrient. Filed Dec. 3, 1956, by Calvin P. Stephenson, doing business as Stephenson Chemical Co. College Park, Ga. First use Aug. 2 1956.

Stimulawn, in capital letters, for organic compost. Filed March 2 1957, by Joseph Scherr, doing business as Enfield Soil Builders, Hazardville, Conn. First use Decembe 1956.

Bemis Executive Calls for Change In Work Attitudes

ST. LOUIS—American business and labor need a change in their attitude toward work, Judson Bemis, Minneapolis, executive vice president of Bemis Bro. Bag Co., declared in a speech before the Century of Commerce banquet of the Metropolitan St. Louis Chamber of Commerce.

Unless business and labor change their attitudes toward work and the rewards of work, Mr. Bemis said, the American economy will founder in a storm of inflation within the next 10 to 15 years. Next to atomic war, inflation is our greatest enemy, he declared.

Mr. Bemis said the nation faces a period of personnel shortages in many fields and the resulting pressure of wage and salary increases. Inflation is bound to occur if businessmen bid each other to the skies in competition for personnel, he said.

"This is not a plea for reducing salaries or wages," Mr. Bemis said. "It is a plea for greater research and effort in the whole field of how best to reward man's labor."

WESTERN MEETING PLANNED

PORTLAND, ORE. — The 19 Northwest Agricultural Chemical Industry Conference will be held at the Hotel Benson, Portland, Ore., Jan. 22-23, 1958. An open meeting with the Northwest Vegetable Insect Conference and the Western Cooperative Spray Project will be held Wednesday afternoon, Jan. 22nd.

E. L. Hassell of Gibraltar Floors listens to . . .

E. L. Hassell, General Manager of Gibraltar Floors, Inc., manufacturers of Dry Mix Concrete, Detroit, Michigan.

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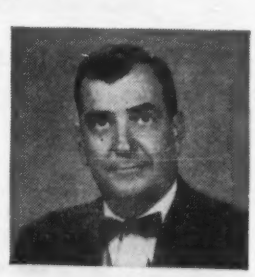
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Farm Chemicals Story from Synthesis to Marketing Is Told at Monsanto Workshop

ST. LOUIS, MO.—Steps taken in the development of an agricultural chemical product, and the part played by technical personnel, testing laboratories, field experimenters, state experiment stations and at last problems involved in marketing the new product, were described in detail at a week-long agricultural chemicals workshop conducted by Monsanto Chemical Co. at its new offices in St. Louis. The meetings began on Monday, Nov. 18 and continued through Friday, Nov. 22.

The company's agricultural chemical salesmen from all parts of the country gathered for the meeting. In his keynote address, J. L. Gillis, vice president, assured the group that Monsanto is in the agricultural chemicals business to stay, as evidenced by large sums being invested in that field in the form of new research facilities and marketing effort. "We are not about to turn our backs on the farm chemical market," he declared.

Mr. Gillis described much of the company's philosophy as regards the agricultural market and its potentialities, pointing out that a "major effort" will be made toward enlarging the scope of these activities.

The workshop's speakers included not only company personnel, but also representatives of state experiment stations, extension personnel, and a presentation by Drs. Joe Bolen and George Beal, Iowa State College, Ames, on "How Farmers Accept New Practices." Dr. W. A. Harvey, extension specialist from the University of California, Berkeley, and Drs. Fred W. Slife and E. C. Spurrier, University of Illinois, addressed the group on the agricultural experiment station's role in the development and sales of pesticides. A banquet was held on the evening of Nov. 21.

Used as case histories in the discussions, were Monsanto's herbicidal products Randox and Vegadex. Some five years are usually required for placing any given agricultural chemical product on the market, it was pointed out by various speakers. The steps through which a typical product must pass were enumerated as being first the chemical synthesis, then a screening process, and after the compound has shown promise, application for protective patents is made. Internal testing is then undertaken, with studies on formulation, toxicology, and later a series of external field tests. Process development is next, then product development, followed by residue studies which lead up to applications for USDA and Food and Drug Administration approval.

These hurdles having been cleared, the product is then ready to be publicized and sales efforts are begun. "It is a long process, and an expensive one," it was pointed out by one speaker. He added that the number of pesticidal materials screened is increasing year by year, with Monsanto alone having screened some 2,500 this year.

Speakers representing the agricultural experiment stations utilized most of Tuesday's meeting time in presenting detailed outlines of how their work fits into the picture. It was the expressed opinion of these speakers that the main functions of a university lie in the fields of teaching, research, and extension. Dr. Slife said that economics are all in favor of the use of herbicides, and presented yield figures to back up his statement. Giant foxtail is a major weed pest in corn and soybean fields in much of Illinois, he said, and tests have been made to determine to just what degree it reduces the yield.

With this unwanted plant using up soil moisture and nutrients, the presence of even a single foxtail weed to the inch along the row reduced corn yields by more than 25 bu. an acre. Soybeans were reduced to a similar extent, he said.

Dr. Spurrier, in describing extension work with farmers in Illinois, declared that the main problem in the way of achieving full acceptance of new chemical products, lies in education of (1) the farmer, and (2) of the man who sells to the farmer. He showed slides picturing farmer and dealer meetings, and declared that experimental effort made with the cooperation of the farmer is an impressive means of education. He indicated, however, that education of the dealer is a critical point inasmuch as many lack sufficient information to answer questions the farmer might ask about a given product. "Therein lies the problem," he told the assembly.

Dr. Harvey described the problems of weed control in California, stating that the situation in that state is unique in many respects due to the wide variety of crops being grown, the different climatic conditions encountered, and the fact that most of the moisture in the soil is dependent upon irrigation. Unwanted vegetation costs the farmers of the state over a billion a year, he said, and voids much of the investment made in irrigating lands for the use of valuable crops.

Dr. Harvey expressed hope that the pesticide industry might some day be assured of a margin of profit sufficient to make possible more complete service to users of chemical products. "When there is not sufficient profit, it hurts both the industry and the farmer," he said. "Inability on the part of the seller to guide the farmer by the hand until the user becomes acquainted with the product and how to use it properly causes misapplication, dissatisfaction, and a loss of confidence on the part of the farmer. It requires a great deal of reselling to talk such a farmer into investing again," the California extension expert said.

AACCO Announces Personnel Changes

NEW YORK—The American Agricultural Chemical Co. has announced personnel changes in its chemical control and fertilizer sales departments.

Joseph Padar has become responsible as chief chemist of the chemical control laboratory at Danville, Ill., serving the Danville and Seymour, Ind., fertilizer plants. J. W. Grooms, formerly with the Savannah, Ga., fertilizer sales office, has become responsible as assistant manager of fertilizer sales at Greensboro, N.C.

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Use the SPM seal to help make sales for you ... *now* ... before it's TOO LATE for TOP PROFITS. See how it can bring in new pre-sold customers who will find that it pays, in bigger yields and higher quality crops, to buy your premium fertilizer containing Sul-Po-Mag.

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EASTERN STATES ESA

(Continued from page 1)

try to lick it before it gets too widespread in this country? We'll all agree, I'm sure, the latter course is the most desirable."

Mr. Burgess said that objectives under such circumstances usually are (1) to confine the problem within limited areas, preventing the pest from spreading and inflicting damage or increasing the costs of production throughout its ecological range in the U.S., and (2) which is perhaps the most important, to eradicate it if at all possible.

The speaker cited as several recent examples of mass control programs, the khapra beetle, soybean cyst nematode and witchweed. While initial costs of such programs may appear high to the federal government, states and people involved, they are minor when compared to the continuing control costs that would be necessary without end if such pests were permitted to run their course, Mr. Burgess declared.

A timetable of control measures and a number of statistics on the gypsy month program were analyzed by the speaker.

"Thus far our field observations indicate the eradication effort against the gypsy moth is progressing satisfactorily," Mr. Burgess reported. We have, therefore, established quarantine provisions to protect the area recently sprayed from receiving infested materials through commerce.

"While to some the methods currently in use to eradicate the insect seem 'revolutionary,' this is hardly the case. They were developed over 12 years ago near the end of World War II and have been extensively studied by scientists in many fields to determine their safety. Before the eradication program got under way in 1956, more than 6 million acres had been sprayed in this manner within the gypsy moth states.

"The principal difference in the current approach rests in concentrating the effort near the periphery of infestation rather than scattering the shots, so to speak, over a much larger area at points where the limits of spot infestations may not be well defined."

A rather pessimistic view of the possibility of eradicating the gypsy moth was taken by Neely Turner of the Connecticut Agricultural Experiment Station, New Haven.

He contended that any experimenter knows that the entire population of a pest is seldom destroyed in any area by a single application of an insecticide, and that "controlling insects by either quarantine or eradication rests on theories that have seldom been tested on a scientific basis and certainly have not been proven."

Pointing to the poor record thus far in attempts to eradicate specific insects, he stated that "this is so because quarantine and eradication are both scientific and political," indicating that "by political, I mean pertaining to the exercise of functions of government."

Referring to initial attempts to control the gypsy moth in Massachusetts and Connecticut, he contended that continued spread despite spraying of lead arsenate and later with DDT, was caused by "the persistence of the gypsy moth and not by lack of effort, incompetence or lack of funds (.$91 million seems to be a reasonably large sum of money.)"

Posing the question "can an insect present in this country for more than 85 years and apparently dispersed over 40 million acres, be eradicated by spraying?" he cited the seven-point program of several years ago which called for eradication west of the Hudson and re-establishment of the barrier zone. "If it can't be eradicated west of the Hudson, there is no need to try eradication anywhere else," he declared.

Questioning whether the gypsy moth is of sufficient economic importance to justify the cost in dollars of eradication by spraying, he stated that "there is no doubt whatever that the present value of heavily infested woodlands in Connecticut is not sufficiently great to justify eradication of the gypsy moth."

He further asked if spraying DDT until the last bug was killed is the only answer to the problem. "This is not the course we follow in handling other pests, be they agricultural or forest. The apparently affirmative answer implied by the eradication program is certainly responsible for the political pressure being brought by organic gardeners and the Audubon Society," he said.

In conclusion, Mr. Turner stated that the probability that the present eradication program will deliver control instead of eradication is overwhelmingly high, and declared that "I personally do not believe in selling eradication of the gypsy moth and then delivering control."

Effects of mass insect control programs on fish and wildlife were described objectively by Mr. Springer. He mentioned some cautions which should be observed in the interest of holding mortality of fish and wildlife as low as possible: (1) maintain careful ground-to-plane control, (2) try to avoid direct application of the insecticide to streams and ponds, (3) use smaller amounts of the insecticides in areas where substantial wildlife is known to exist, (4) use small planes or ground application around lakes whenever possible, (5) avoid turnarounds by spray planes over water, (6) avoid spray application during brooding periods of birds.

The speaker listed several situations involving spraying activity around fish and wildlife about which more information should be gathered: (1) the ability of certain species of wildlife to re-populate after insecticide spraying, (2) the problem of delayed entry of residual chemicals into waterways by flushing action of rains following application of the insecticide, (3) the question of sub-lethal effects of chemicals on wildlife, or the effect of chemicals on morbidity, fertility, etc.

The speaker said that there was no larger-scale damage from the gypsy moth spray program in the east this year to fish and wildlife. In a few localities where trees failed to provide sufficient cover for streams and ponds, there was damage to fish. Slight damage to birds was reported by Mr. Springer. Tests have shown that application must exceed 2 lb. an acre to be acutely toxic to birds, he said, while the recommended levels of one-half to one pound an acre were found to do relatively little damage, particularly to vertebrates.

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TULSA, OKLA.—*1708 Utica Square*
WICHITA, KAN.—*501 KFH Building*

Special Merchandising Section

Better Selling

Marketing News and Features

SPRAYER DEMONSTRATION—John R. Spiller (right), Spiller Feed & Seed Co., Tuscaloosa, Ala., demonstrates the favorable points of a sprayer to a customer in his retail store. In the background can be seen an orderly sprayer display which the customer can examine at leisure. Mr. Spiller handles complete lines of farm chemicals and related merchandise.

Alabama Dealer Says Fertilizer Helps Set Off Chain of Sales

By Al P. Nelson
Croplife Special Writer

Whether a customer wants a 10-lb. package of fertilizer or a 100-lb. sack, he can get it at Spiller Feed & Seed Co., Tuscaloosa, Ala., operated by John R. Spiller.

Mr. Spiller says that some people with small garden plots buy fertilizer in small amounts, and he likes to accommodate them because such customers frequently buy seeds, insecticides for garden and lawn, garden tools, power mowers and many other items for lawn and garden.

"We look upon fertilizer as a product which starts a chain of other sales," states Mr. Spiller. "When I first opened this store several years ago I determined we were going to get those extra sales, and that is why we have a large display of allied garden and lawn items."

This store, which also sells feeds and chicks, has a large seed department, handling both garden and field seeds. Both small gardeners and farmers with 100 acres of land patronize the store. Mr. Spiller reports that he has stock which fits both classes of trade.

"Due to our long growing season we are able to sell fertilizer and insecticides many months of the year," he says. "We stock bulbs of one kind or another 12 months of the year, and this feature alone brings many customers in during fall and winter."

There are few dealers who go into the idea of exterior and interior display as thoroughly as does Mr. Spiller. For example, he has one wooden, two-tier display rack of vegetable plants and flowers which is on wheels, and it can be pushed in and out every day. This rack accounts for many extra sales. Being outdoors it attracts much attention daily.

"When a customer comes to get some tomato or other plants the chances are that some fertilizer goes along with the sale, and also some insecticide," states Mr. Spiller. "Rare is the person in the area who doesn't have a vegetable garden, and some folks grow two crops of some vegetables annually. This requires a lot of plant food."

Mr. Spiller also has garden tools mounted on racks which are on wheels. These racks, too, can be pushed outdoors every morning and brought in with a minimum of effort every night. Mr. Spiller carries the heavy weight tools for men and also the light weight hoes and other tools for women.

"You'd be surprised how many light weight hoes we sell to women just by showing them the line when they buy seeds and plants," he said.

This dealer points out that in many areas of the South, there has arisen a vast new market of small sales in

(Continued on page 13)

"Now, let me get it straight. They want the formula changed on this fertilizer which formula we changed last week from a formula discarded in favor of a previous formula change."

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

Test your knowledge of the federal income tax law, suggests the headline on a quiz prepared by the American Institute of Certified Public Accountants in cooperation with the Internal Revenue Service. Interestingly enough, the quiz has a number of questions which could have application to many situations in the retail farm chemical business.

The writer didn't do too well on the quiz, frankly, but to him there is always the consolation that few know **all** the answers on the income tax law and the fact that often the service has to issue "opinions" is indicative that even those who administer the law find it necessary to clarify its intent. For those who want to try some of the more practical questions in the quiz and try to match their answers with those given by the AICPA, (see end of the column) here are a few examples:

1. During the past year you spent approximately $1,000 for built-in bookcases and wall-to-wall carpeting for your office. Since your lease has only four years to run, you may . . .
   (a) Deduct the $1,000 on your 1957 tax return
   (b) Amortize the cost over the next four years
   (c) Depreciate it over the life of the furnishings

2. You have invested in several blue-chip stocks. The dividends received from this investment are exempt up to . . .
   (a) $50 whether you or your wife owns the stock
   (b) $100 if the stock is held jointly by you and your wife
   (c) $100 regardless of who owns the stock, providing you file a joint return with your wife

3. You are **not** permitted to deduct as contributions your donations to which of the following organizations . . .
   (a) Charitable societies
   (b) Educational institutions
   (c) Political parties

4. You filled very few inside straights during the past few months and lost approximately $300 to the members of your Thursday night poker club. You should . . .
   (a) Deduct the loss in computing adjusted gross income
   (b) Subtract the loss from adjusted gross income
   (c) Give up poker and start watching television on Thursday nights

5. Last October your car skidded on a wet road and grazed a telephone pole. The damage was not covered by insurance and it cost you $100 to have the car repaired. To claim a casualty deduction . . .
   (a) You must have the damage repaired within 30 days of the accident
   (b) You may simply deduct the amount of the repair bill
   (c) You must prove that you were using the car in your work at the time of the accident

6. Which of the following may you not consider as a deductible business expense . . .
   (a) A subscription to Croplife
   (b) Commutation fees
   (c) The costs of attending a trade convention

7. While playing hide-and-seek in your backyard, the neighbor's children trampled and killed several of your more expensive bushes. The cost of replacing this shrubbery . . .
   (a) May be deducted if it does not exceed the original cost of the bushes
   (b) May be deducted only if the parents of the children refuse to pay damages
   (c) May not be deducted under any circumstances

8. Your 16-year-old son works during the summer for you in your unincorporated business, and you pay him a weekly salary. Since he is a full-time employee, he is . . .
   (a) Required to pay social security
   (b) Not subject to social security
   (c) Permitted to decide whether he does or does not want social security coverage

9. Last year you gave your church a small piece of property for which you had paid $500 some time ago. Its value at the time of the gift was $1,500. As a result . . .
   (a) You may claim a tax deduction of $1,500
   (b) You must pay a capital gains tax on the $1,000 increase
   (c) You may claim a tax deduction of $500

10. There were a few leaks in the shingle roof of your office building; so you constructed a new tile roof. You should . . .
   (a) Consider this as a repair bill and deduct the entire amount as a business expense on your 1957 return
   (b) Regard this as a capital improvement and depreciate the cost over a period of years
   (c) Add the cost of the repair to the value of the property

11. After you have filed your personal 1957 tax return, the government is allowed to check your return and bill you for additional tax. The period of time in which this may be done ends . . .
   (a) On the day you file your 1958 return
   (b) Two years after you file your 1957 return

(Continued on page 11)

QUOTE

"A farmer deals with concrete things and understandably he is suspicious and uncomfortable with words and abstract things. He is a little suspicious of people who talk fast. A salesman should know one simple thing. He shouldn't talk faster than the farmer he is talking with. You will be amazed how much fast talk arouses a feeling of vigilance; of "what is this guy trying to sell me?" Immediately the farmer's guard goes up as the tempo of the salesman's speech increases." — Albert Shepard, Institute of Motivational Research, Inc., Croton-on-Hudson, N.Y.

What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 5833—Electric Vibrator

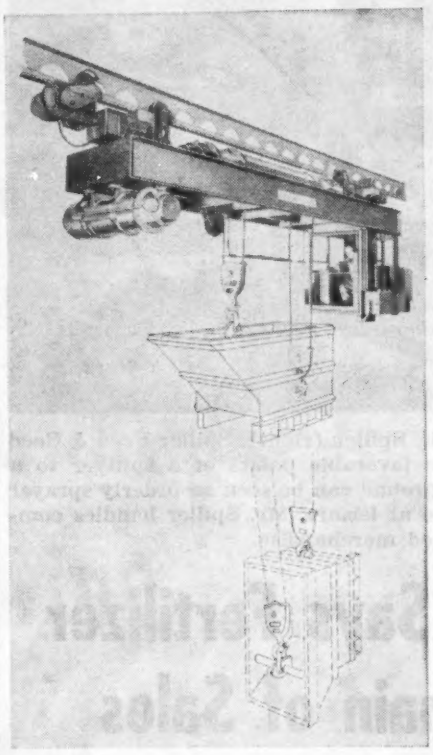
The Cleveland Vibrator Co. has announced a redesign of its RC-50 electric vibrator, used on bins, chutes and hoppers for handling all types of dry or viscous bulk materials. The purpose of the design change, the company stated, is to provide a more powerful unit that is easier to handle and install. The new unit develops a maximum vibrating impact of 2,250 lb. This compares with 1,440 lb. with the old design. The unit is 15 lb. lighter, weighing in at 84 lb. The over-all length has been reduced from 14¾ in. to 13⅛ in. The mounting base is changed for easier installation and to provide a better support for the vibrator. Heavier duty wiring is now used. The RC-50 idles at 200 watts on 220 volts. Models 110, 440 and 550 volt are also available. Secure details by checkinig No. 5833 on the coupon and mailing it to this publication.

No. 6658—Non-Pressure Solutions

The Broyhill Co. has available literature about its equipment for non-pressure nitrogen solutions and balanced mix solutions. Company officials said that the applicators described are designed for "easy and trouble free applying of liquid fertilizers." The units are for sale or rent to customers. The literature, including prices, is available without charge. Check No. 6658 on the coupon and mail it to Croplife. Please print or type.

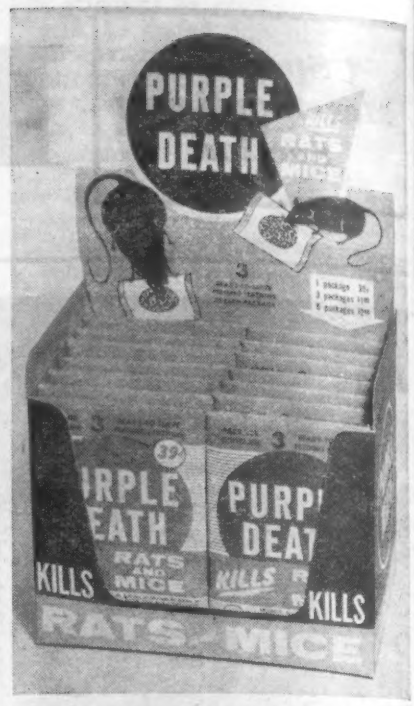
No. 5859—Hoist Carrier

A cab-controlled twin-hook hoist carrier provided with an auxiliary hoist for dumping has been built by the Cleveland Tramrail Division, the Cleveland Crane & Engineering Co. Of weatherproof construction for outdoor service, the unit will pick up tote boxes of materials, haul them and empty by tipping. Various bulk materials may be handled. Hoisting and travel motions are controlled by the cab operator. The main hoist alone raises or lowers a tote box in upright position. Hoist speed is 35 f.p.m. Travel speed is 250 f.p.m. Variable speed drum controllers are previded. The capacity is 12,000 lb., i.e., 6,000 lb. per hook. Other carriers of different capacities can be furnished. Secure details by checking No. 5859 on the coupon and mailing it to this publication.



No. 5839—Belt Conveyor Idlers

New literature on belt conveyor idlers manufactured by the C. O. Bartlett & Snow Co. is available without obligation. An 8-page bulletin describes the line of idlers including troughing, flat, self-aligning, rubber disc and return designs; 4-, 5- and 6-in. diameter rolls fitted with either Timken or "sealed for life" bearings; construction; and lists standard sizes, dimensions and weights. Check No. 5839 on the coupon and mail it to secure details.



No. 5826—Rat, Mouse Control

"Purple Death" is the trade name of a rat and mouse control which has been placed on the market by the O. E. Linck Co., Inc. Company officials say that the product is high in proteins, minerals and vitamins, to make it attractive to rodents. The toxicant used is said to be tasteless and odorless. A single good feeding is said to assure certain kill. The product is packed in polyethylene lined feeding stations, each station being capable of killing 6-8 rats or 10-15 mice. Dealer mark-up on the product is about 48%. Secure complete details by checking No. 5826 on the coupon and mailing it to this publication.

No. 5828—Insecticide

A new insecticide, "6% Chlordane Dust," in a refillable squeeze duster and two new sizes for the "Hess Bomb" aerosol have been placed on the market by Hess & Clark, Inc. The chlordane dust product is designed for use on household, lawn and garden insects. The container holds 8 oz. and a 2½ lb. refill is also available. Bomb aerosol sizes are 7 oz. and 15 oz. This product contains strobane, a hydrocarbon. Dealers may secure details by checking No. 5828 on the coupon and mailing it to this publication.

No. 5843—Bulk Materials Movement

A new 32-page product bulletin, "Airstream Conveyors — the Automatic Answer to Bulk Handling," has been published by the Dracco Corp. Bulletin No. 530 presents detailed technical information on how pneumatic conveying of bulk materials can be utilized. System diagrams of typical installations point out the applications of the conveyors. More than 70 illustrations are included. Materials—both granular and powdered — which can be handled are listed. A copy is available without charge. Check No. 5843 on the coupon and mail it to this publication.

No. 6657—Can Printing

A portable printing device for printing on 5-gal. cans has been developed by the Metal Products Division of the Chapman Chemical Co. The machine is called by the trade name, "Print-A-Can Printer," and is said to handle up to 500 cans per hour with one inexperienced operator. The unit weighs 160 lb., is equipped with casters, can print markings stable enough to exceed requirements for government contracts, and is low-cost, company officials state. Secure details by checking No. 6657 on the coupon and mail it to Croplife.

No. 6654—Sprayer, Duster Catalog

The Oakes Manufacturing Co., Inc., subsidiary of the Food Machinery & Chemical Corp., has released its "Sanitized Bean Oakes 1958 Sprayer and Duster Catalog." The catalog shows a line of tank and hand sprayers, dusters and power sprayers for

Send me information on the items marked:

☐ No. 5825—Laboratory Mixer	☐ No. 5844—Vacuum Cleaners
☐ No. 5826—Rat, Mouse Control	☐ No. 5870—Tank Car
☐ No. 5828—Insecticide	☐ No. 6652—Bagging Unit
☐ No. 5829—Bulk Container	☐ No. 6653—Chemicals Folder
☐ No. 5833—Electric Vibrator	☐ No. 6654—Sprayer Catalog
☐ No. 5839—Idlers	☐ No. 6655—Tomato Hormone
☐ No. 5843—Bulk Materials	☐ No. 6656—Lubricant Booklet
☐ No. 5859—Hoist Carrier	☐ No. 6657—Can Printing
	☐ No. 6658—Solutions

(PLEASE PRINT OR TYPE)

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2 (Sec. 34.9, P. L. & R.) MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—
Croplife
P. O. Box 67
Reader Service Dept. Minneapolis 1, Minn.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

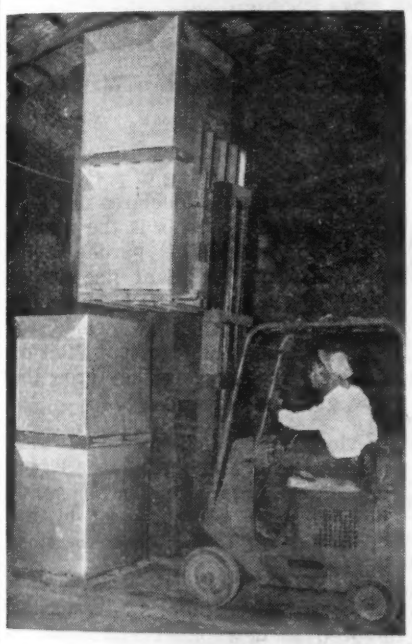
use on the farm and in the garden. John Bean Division and Oakes are sharing production responsibilities for these products. New additions to the products which Oakes will sell through its jobber and dealer accounts are the "Spartan" and "Trojan" lines of power sprayers. Secure full details by checking No. 6654 on the coupon and mailing it to Croplife. Please print necessary information on the coupon.

No. 6653—Industrial Chemicals Folder

Sohio Chemical Co. has prepared a folder on its industrial chemicals, which include anhydrous ammonia, aqua ammonia, nitric acid, urea and 83% ammonium nitrate solution. Specifications, descriptions, uses and shipping information are listed for each of the products. The folder states that rail or truck delivery is available and that technical assistance and laboratory service are offered without obligation. Secure details by checking No. 6653 and printing the necessary information on the coupon and mailing it to Croplife.

No. 5829—Corrugated Bulk Container

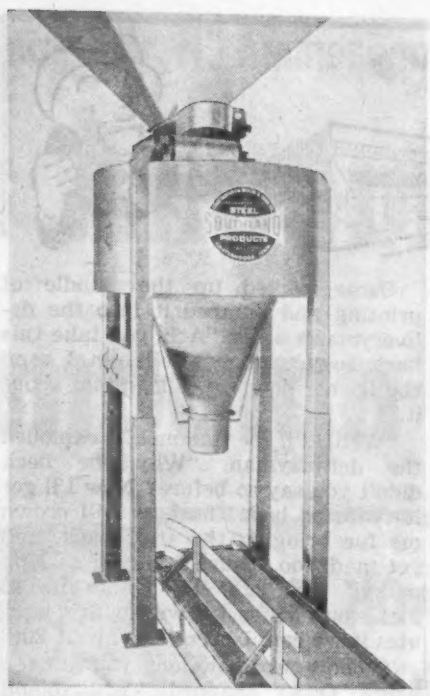
A corrugated bulk container which holds from 1,000 to 1,500 lb. of a product is being manufactured by the Gaylord Container Corporation Division of Crown Zellerbach Corp. The container is said to provide a clean storage box with a cover for protection from contamination and makes it possible to obtain maximum storage capacity safely and efficient-



ly in a warehouse. The corrugated containers can be knocked down flat for easier storage until they are to be used again. The containers can also be used for shipping merchandise. Check No. 5829 on the coupon and mail it to secure details.

No. 6652—Bagging Unit

The Chase Bag Co. has announced a new bagging unit for the fertilizer industry. It is called the "Southland Packer" and it is described as a completely automatic, all-electric device for filling and weighing open mouth textile or multiwall paper bags. It is manufactured by the Chattanooga Boiler & Tank Co. and is distributed exclusively by Chase. It is claimed that the unit will handle 50-, 80- and 100-lb. multiwall paper bags at 25 bags per minute as a typical working speed. Sustained high accuracy of weights over an extended run is guaranteed. Fertilizer and any other granular or free flowing material can be packed. Chase officials state: "Minimum change-over time from one analysis to another is an outstanding feature." Cylindrical hoppers and buckets allow a clean and complete flow of material. Simplicity of design reduces maintenance costs and problems. Parts are standardized and can easily be interchanged in plants where



more than one packer is in use. No air or hydraulic fittings are used. The packer is made from 12 gauge or heavier steel plate and requires no external bracing for rigidity. The feeder is of the continuous operating type, using a ½ h.p. gear-enclosed motor to operate its endless belt, over 8 in. self-cleaning pulleys. Check No. 6652 and print the necessary information on the coupon and mail it to Croplife to secure details.

No. 6655—Tomato Hormone Spray

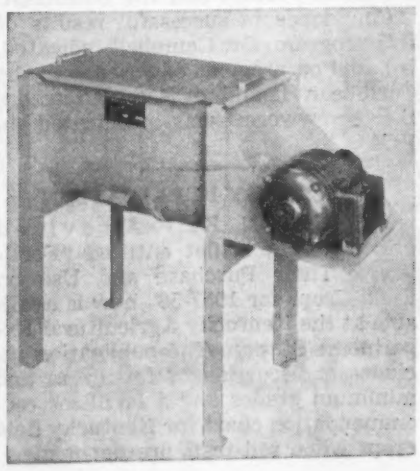
A new tomato hormone spray, called by the trade name, "Tomato Set," is available from the Miller Chemical & Fertilizer Corp. The company announcement states that the spray was developed by Dr. E. M. Emmert at the University of Kentucky experiment station, that a patent has been applied for by the Kentucky Research Foundation, and that the Miller company has been licensed by the foundation to manufacture and distribute the new spray. Application of the product can be made broadcast over the entire plant and the set and fruit size can be increased, company officials state. The product is a combination of boron and a synthetic hormone and can be mixed with insecticides and fungicides, if desired. Details may be secured by checking No. 6655 on the coupon and mailing it to Croplife.

No. 5844—Vacuum Cleaners

A new line of heavy duty wet-dry vacuum cleaners has been introduced by the Clarke Sanding Machine Co. The line includes six units ranging from a ½ h.p. model with 2½ gal. wet and ½ bu. dry capacity to a 1½ h.p. conversion unit which converts a 55-gal. drum into a vacuum cleaner tank with 50 gal. wet and 6½ bu. dry capacity. Check No. 5844 on the coupon and mail it to secure details.

No. 5825—Laboratory Mixer

The Rapids Machinery Co. has introduced its new Marion laboratory mixer, designed for use in the laboratory or as a production machine. The



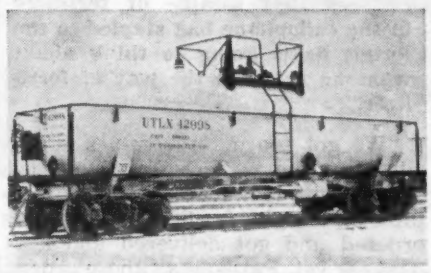
mixer is a "compact unit that features the same cross-blending mixing action found in the larger standard and industrial units," company officials said. Inside dimensions measure 24 in. long, 12 in. wide and 16 in. deep, with an over-all length of 36 in., a width of 19 in., and a height, with legs, of 34 in. It has a capacity of 2 cu. ft. or approximately 50 lb. and it is available in either mild steel or stainless steel and comes equipped with a ¾ h.p. motor, iron legs, and a sponge rubber-gasketed cover. Secure complete details by checking No. 5825 on the coupon and mailing it.

No. 6656—Lubricant Booklet

A new booklet published by Monsanto Chemical Company's Organic Chemicals Division claims that "major savings in air compressor maintenance costs and greater safety from flash fires and explosions can be obtained with Pydraul AC, a fire resistant synthetic lubricant for air compressors." The auto-ignition temperature of the fluid is said to be greater than 1,100° F. Carbon deposits on exhaust valves and in interstage equipment are reduced with the lubricant, is is claimed. Secure the booklet by checking No. 6656 on the coupon and mailing it to Croplife. Please print name and address.

No. 5870—Tank Car

A new multi-purpose tank car which incorporates two fundamental changes in tank car design—elimination of the dome and underframe—is announced by the Union Tank Car Co. Called the "HD" tank car, the unit serves where previously four separate tank classifications were re-



quired, company officials say. With only minor modifications the new tank car can be used as a general service car; for carrying acid; as an insulated car; and as a low pressure car. Secure details by checking No. 5870 on the coupon and mailing it to this publication.

Soil Tests Required For Some Kentucky County ASC Programs

LEXINGTON, KY.—Changes have been made in the Kentucky Agricultural Stabilization and Conservation Handbook regarding the use of lime and fertilizer during 1958 by farmers participating in the cost-sharing program.

Soil tests will be required in all county programs for the application of lime and fertilizer in connection with the practice of improving established grass and legume cover. Soil tests will be required in all county programs in all cases for the practice of applying lime and rock phosphate. Soil tests for other practices may be required in county programs.

Where soil tests are not required, greater flexibility will be permitted in establishing minimum and maximum applications of fertilizer for cost-sharing purposes. The county program shall require not less than 90 lb. of total plant nutrients (N, P_2O_5, K_2O) nor authorize more than 240 lb. of total plant nutrients for cost-sharing. Of this total there shall be a minimum requirement of 20 lb. of nitrogen and not more than 40 lb. of nitrogen per acre for cost-sharing.

The ratios and rates of application shall be stated in each county program.

OVER THE COUNTER

(Continued from page 9)

(c) Three years from the due date of your 1957 return

Correct Answers

1. (b) On leased property, you normally spread the cost of improvements over the shorter period—the life of the improvement or the term of the lease. Since your lease expires in four years and presumably the furnishings will have a longer life than that, you should be able to claim a $250 deduction on your federal tax return for this year and the next three years.

2. (a) and (b) are both correct. All taxpayers are entitled to a $50 dividend exemption. A husband and wife can combine their exemptions and receive $100 in dividends tax free, providing the stock is jointly owned. The filing of a joint return will not qualify them for this double exemption if the stock is held in only one of their names.

3. (c) You cannot deduct contributions to an organization which spends a substantial part of its time lobbying or distributing political propaganda.

4. (c) Watching television can be most relaxing and it might even help you to forget your poker losses—which is the thing to do because net gambling losses are definitely not deductible. Net gambling gains are taxable as income; so if you won money in a football pool or other sources, you may use your poker losses to offset these gains.

5. (b) The IRS has ruled that "if the repairs do nothing more than restore the property to its condition immediately before the casualty and do not add to (its) value, utility or useful life, such repair costs may be used as a measure of the value of the destroyed portion." Where you were going at the time of the accident does not affect the deductibility of car damages.

6. (b) Commutation fees are not a deductible business expense. The cost of going to and returning from work, whether it be by bus, cab, train or plane, is not deductible since it is a personal expense. On the other hand, a and c are deductible.

7. (c) Damage to your shrubbery caused by children, dogs or errant lawnmowers is not deductible. If your home or lawn is damaged by fire, storm or flood the loss not covered by insurance may be deducted. When large amounts are involved it is wise to have an expert appraisal made immediately after the casualty.

8. (b) Since your son works for you, you are not supposed to pay social security tax on his wages, nor is he required to make contributions. If business is incorporated, however, the corporation must pay social security tax on his salary.

9. (a) Your deduction for a charitable contribution is the value of the gift at the time it is made. You are not considered to have realized a taxable gain or deductible loss when you give property away. You may claim a deduction for the entire $1,500 so long as this amount does not exceed 20% (30% in some cases) of your adjusted gross income.

10. (b) The roof is considered an improvement, not an ordinary repair. The cost of replacing the roof is deductible as depreciation spread over its estimated useful life.

11. (c) In the absence of fraud or substantial understatement of income, the government has three years from the due date of your 1957 return to check your return and bill you for additional tax. Since the due date of most individual returns is April 15 and for investigation purposes all returns are treated as though filed on the due date, you should be sure to save all check stubs and receipted bills to prove your declared deductions until April 15, 1961.

Doing Business With

Oscar & Pat

By AL P. NELSON
Croplife Special Writer

Oscar Schoenfeld was not in a very good mood. In the first place, a freight train had blocked the crossing near the farm supply store, delaying Oscar by 10 minutes. Then, arriving at the store he had discovered someone had left an unnecessary light on in the warehouse and it had burned all night. Also Minnie had burned the bacon this morning, and Oscar didn't like burned bacon.

So he hardly said hello to plump, ulcerish-inclined Tillie Mason when she came to work. She smiled brightly, but seeing Oscar's face, shrugged and went to work. Soon her typewriter was clicking merrily as she began typing letters which Pat McGillicuddy had dictated to her the day previous.

An hour and a half later, a stocky delivery man from the local printing company entered the display room. He was carrying a sizable bundle under his arm, dumped it on a display table and nonchalantly pulled a pencil from behind his ear and slapped down a delivery book. "Sign here," he said to Oscar.

The frown on Oscar's face deepened. He looked at the man, then at the bundle, then back at the man. "Sign what?" Oscar asked.

"For that printin'," replied the delivery man. "And I guess it was a helluva job, accordin' to the boss. Said he'd never do it again, but Pat has thrown so much business our way, he felt he had to help him out."

"Sooo" said Oscar sharply, with the air of a man who has found somebody to criticize. "That Irisher is spending money again. Ach, you would think he was with the government, the way he throws it aroundt."

He got up, walked to the display counter and tore open the package. He gasped as he saw a stack of printed letters, and in the upper right hand corner an inch square cellophane bag containing a greyish material was stapled.

"It looks like fertilizer in those little bags!" Oscar howled. "Now he is giving it away in little bags. Ach, will that man ever learn?"

"Listen, fella," said the deliveryman. "I got other deliveries to make. People are waitin'. I can't go till you put your John Henry on this delivery receipt."

"Always he wants to give things away," Oscar fumed, walking up and down like a frustrated rooster. "What's the matter with selling fertilizer straight out and gettin' cash for it on the spot? Tell me that, will you?" And he shook his finger at the deliveryman, as if he were the offending culprit.

"I dunno. I don't sell fertilizer," protested the deliveryman, a stubborn look on his face. "I only deliver printing. We got enough problems of our own without worryin' about other people's. Are you gonna sign this receipt?"

"Lookit here," Oscar thundered, picking up a letter, "he tells the farmer this is a sample of 10-10-10 fertilizer. It ain't enough to fertilize 80 acres, but it is just a good reminder that Schoenfeld and McGillicuddy got enough good fertilizer on hand to take care of any farm. Ach, they know we got fertilizer. How can he be so foolish to waste money tellink them the same thing over and over again. He is crazy!"

"Listen, Mister," said the deliveryman. "I gotta get this receipt signed. My boss'll send me back if I don't get a John Henry on it."

Tillie Mason had picked up a copy of the letter. "But, Oscar," she said. "I typed this letter for Pat to send to the printer. Read a little farther. Pat is trying to get farmers to use more fertilizer in fall, liquid or dry, or at least place their order for spring delivery. This is just a reminder. When the farmer sees that sample of fertilizer in the cellophane bag stapled to the letter, he is going to think about what he needs in the way of fertilizer."

"We got too many samples of fertilizer out now" Oscar thundered. "We've got two to ten tons of samples on single farms that farmers ordered and got delivered and ain't paid for yet. Pat sold all those orders. Yah, the farmers got the fertilizer, and what have we got? Nottink—yet. Some farmers owe us for five months."

"Mister," the deliveryman said slowly, his face slowly getting red, "time's a slippin'. My boss is gonna give me hell for taking so much time on this call. Put your John Henry on this slip—please."

"I sign nottink I didn't order," Oscar announced. "Somebody has got to put his foot down someplace, and, ach, I do it."

The deliveryman looked worried. He turned to Tillie. "Lady," he appealed, "will you sign it?"

Tillie wavered, then looked at Oscar, who frowned at her.

"N—no, I don't think so. I—I only work here."

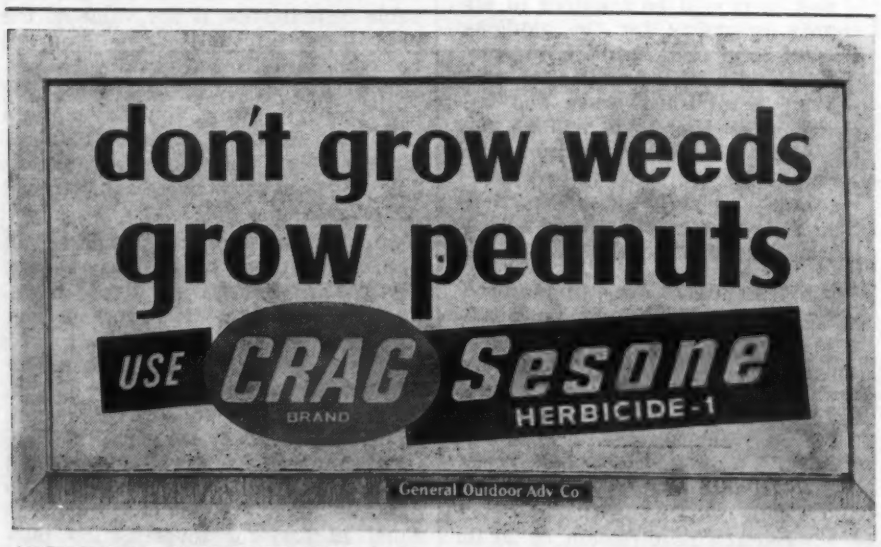
Oscar picked up the bundle of printing and dumped it into the deliveryman's arms. "Ach, you take this back to your boss. Tell him I send the Irisher down to talk to him about it."

"Well, I'll be damned," exploded the deliveryman. "Why the heck didn't you say so before? Now I'll get it twice as bad. The boss will crown me for bringing the stuff back, and get mad, too, 'cause I stayed so long makin' this call. He wants us to make our deliveries within five minutes if we can. I been here about 20!"

"I don't care how long you've been here," Oscar snapped. "You should not be here in the first place yet. Ach, I will tell that partner of mine something. You think you got troubles. If you come and work here and see what goes on with that Irisher, you would know what troubles are, eh, Tillie?"

But Tillie's head was bent over the typing, erasing a typing error. The deliveryman walked to the warehouse door with the package, and Oscar seated himself importantly at his desk and began looking over his papers.

"Wow!" whispered the deliveryman as he walked across the warehouse floor. "And I thought my boss was an old grouch!"



ADVICE TO GROWERS—This billboard, placed in strategic spots in peanut-growing areas of the U.S., strikes a wise note in reminding passing farmers that there is no profit in growing weeds on valuable acres. The Crag Sesone herbicide advertised on the board is produced by Carbide and Carbon Chemical Corp., division of Union Carbide & Carbon Corp., New York.

Plans Move Ahead For Florida Screwworm Eradication Program

SEBRING, FLA.—The Florida screwworm eradication program has established headquarters in a converted hangar at the Air Base here, Dr. C. L. Campbell, Florida state veterinarian, has announced.

The remodeling of the hangar will enable the Florida Livestock Board and the U.S. Department of Agriculture to meet the requirements of the extensive space requirements of an "assembly-line plant" designed to produce 50 million sterile screwworm flies per week when the program reaches peak production next summer.

According to Dr. T. H. Applewhite, USDA veterinarian in charge, nearly all the operations will be automatic, synchronized with the life cycle of the screwworm. Special facilities are being designed to carry the insects through every stage of development, from the eggs of laboratory brood stock to adult flies.

"The insects will be made sexually sterile by exposure in the pupal stage to radioactive cobalt-60," Dr. Applewhite said. "The insects retain no radioactivity, however, and are not a source of radiation to persons or livestock."

The flies will be released from airplanes in large numbers to mate with wild flies and begin a population decline that is expected to result in complete extermination of screwworms in Florida and the Southeast.

Confidence in successful results of this program, Dr. Campbell indicated, is based on previous experience in the Caribbean Island of Curacao where the screwworm was eradicated in 1954.

KENTUCKY PUBLICATION

LEXINGTON, KY.—A revised printing of a leaflet entitled "Fertilizers, Their Purchase and Use on Field Crops for 1957-58" now is available at the Kentucky Agricultural Experiment Station. The publication includes a discussion of fertilizers and minimum grades and a fertilizer recommendation chart for Kentucky field crops when soil tests are not made.

ALABAMA DEALER

(Continued from page 9)

the garden supply field. He believes that the alert feed and fertilizer dealer can profitably cater to this field. By adding many small garden supply sales to the farm business, a dealer is able to get a much larger volume than if he catered mostly to just farmers, Mr. Spiller reports.

Mr. Spiller says that many customers spend from $50 to $400 annually on lawns and gardens, and that there are hundreds of such customers in his locality. Most of the purchases this trade makes are for cash, while some sales to farmers are often on the books for 30 days or more. However, the wise dealer can handle both types of trade, Mr. Spiller states. So long as he gets cash for part of his volume, he can wait a little for payments from the farm trade, when necessary.

Plastic garden hose is one item that sells well in a farm supply store which has a town or city patronage in part, Mr. Spiller points out. By attaching parts of 2 by 4 lumber to an underhang in part of his store, he displays many lengths of wrapped garden hose on them. The garden hose can quickly be seen by most customers.

The store sells quite a bit of a DDT preparation which is put into trenches under a house, and which protects against termites for many years. In this area of the country there are many houses without basements and thus such a preparation is easily applied.

Mr. Spiller has three islands which are devoted to a showing of insecticides and fumigants, and stock moves very rapidly from them.

"In the very near future we are going into the selling of potted plants the year around," declares Mr. Spiller. "I think that this is the next big development in the garden supply field. The potted plant line will include many flowers and other house plants, and it may also include some small shrubs. They are easy to stock and care for, and as they grow they have greater sales appeal."

Along with the sale of such plants the dealer envisions a bigger demand for plant food, a fact which has already been proved by the large sale of bulbs which the store achieves.

Most of Mr. Spiller's advertising is devoted to newspaper and radio ads. He likes radio spot ads which highlight seasonal offerings. Most of his ads encourage customers to come in and browse around. His experience is that when a garden minded customer walks around the store he makes not only an original purchase, but several more.

Trade Increased Fertilizer For Higher Crop Output, Mississippi Expert Says

STATE COLLEGE, MISS.—"Trade increased fertilizer for higher crop production," is the advice to farmers of W. R. Thompson, Mississippi extension pasture specialist.

"Pasture fertilization will make money for you if you make a definite plan for using the fertilizer and a definite plan for selling the products grown from fertilized grass," he says.

Clovers fertilized this fall with phosphate and potash either on hillsides or in bottoms will make a lot more growth. These materials, either as minerals or mixtures can be top dressed in the middle of the day when clovers are dry without serious injury to the clovers.

Farmers using sod seeders can put out the fertilizer at time seed is planted and clover profit can be made from the application in the ground, Mr. Thompson said.

To help you sell more Spencer "Mr. N" Ammonium Nitrate and more mixed fertilizer than ever before

Spencer Announces Its Biggest Ad Campaign Ever For 1958

Tennessee Farmer
Florida Grower and Rancher
Arkansas Farmer
Good Farmers Call 'em The Mortgage Lifters
The Progressive Farmer
Farm and Ranch
The Kentucky Farmer
Ads in magazines like these will sell farmers on using both "Mr. N" and mixed fertilizer!

A Giant Series of Magazine Ads During Your Biggest Selling Season

To help build sales for you, Spencer is running advertisements that tell success stories of farmers in your area! Every one of these ads sells farmers on the idea that a *complete* fertilization program, that includes both mixed fertilizer and Spencer "Mr. N", pays off in extra yields and extra profits per acre!

During the peak of your selling season, 9 out of 10 families in your area will be reached by these advertisements. From January through May, Spencer will be running ads in all six of these leading farm publications:

Progressive Farmer

Farm and Ranch

Florida Grower

Kentucky Farmer

Tennessee Farmer

Arkansas Farmer

But that's not all! To make this advertising campaign even stronger, Spencer is also going to sponsor programs on the most popular farm radio stations throughout the South! So get ready for sales—stock up on Spencer "Mr. N"!

More Southern Fertilizer Experts Prefer Spencer "Mr. N" Ammonium Nitrate:

An independent survey proved it: Spencer "Mr. N" is the favorite of the men who know fertilizer best — the South's own fertilizer manufacturers! When you stock "Mr. N", you can be sure you have the brand of ammonium nitrate that Southern fertilizer experts prefer . . . the brand *your* customers *know, want* and *buy!*

Will not cake! Since "Mr. N" is made in round prills and packed in polyethylene-lined bags for 100% dryness, it *stays* free-flowing. That's mighty important to you *and* your customers: No expensive, special storage facilities are needed!

Now, to help you sell more "Mr. N" to more people in your area, Spencer is backing you up with a stronger advertising campaign than ever before. So see your fertilizer manufacturer right away. Stock up on Spencer "Mr. N" Ammonium Nitrate!

A Giant Series of Farm Radio Programs During Your Biggest Selling Season

Radio Farm Directors will be recommending that their listeners use both mixed fertilizer and Spencer "Mr. N" Ammonium Nitrate! During your strongest selling months, leading farm directors on this line-up of top stations will be working to boost sales for you:

WMC	Memphis, Tenn.
WHAS	Louisville, Ky.
WSM	Nashville, Tenn.
WSB	Atlanta, Ga.
WAPI	Birmingham, Ala.
WBAM	Montgomery, Ala.
WBT	Charlotte, N. C.
KTHS	Little Rock, Ark.

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What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

Nearly 325 delegates turned out for the National Liquid Fertilizer Assn. convention in Cincinnati. Richard Cecil, Bartlett & O'Bryan Fertilizer Co., Owensboro, Ky., was named president. Ideas for expanding sales were discussed and equipment displays were set up during the convention.

The cost of fertilizer to farmers rose only about 1% in the year ended last Sept. 15, according to the U.S. Department of Agriculture. The fertilizer increase was the lowest in the USDA list of farmer production items except for seed and feed.

Insect resistance is real but is not always the cause of poor control measures with insecticides, it was pointed out at the Florida State Horticultural Society meeting.

The fertilizer industry Round Table held in Washington, was the occasion for presentation of numerous papers on manufacturing technology and new methods. Under the direction of Dr. Vincent Sauchelli, National Plant Food Institute, the 6th annual event attracted some 275 persons from the fertilizer industry.

The cotton yield for 1957, tallied at 413 lb. an acre, was 4 lb. an acre under the record of 1955, but still greatly beyond the ten-year average. Bales produced this year were estimated at 11,788,000 as compared to 13,310,000 bales produced in 1956.

Dr. Frank J. Welch was appointed to the board of the Tennessee Valley Authority on an interim basis, to replace the late Raymond R. Paty who died earlier this year. Other members of the board, now at full strength, are Herbert D. Vogel, chairman, and Arnold R. Jones. Mr. Jones is also on the board on an interim basis. The appointments of both himself and Dr. Welch will have to be confirmed by the Senate when it convenes early in 1958.

The California Fertilizer Assn. met at San Francisco in its 34th annual meeting. William G. Hewitt, Berkeley, was elected president to succeed Jack Baker, Los Angeles. Dr. R. L. Luckhardt, Collier Carbon and Chemical Corp., Los Angeles, was named "Industry Man of the Year."

Virginia-Carolina Chemical Corp. named James E. Nall vice president and general manager of its fertilizer division. Mr. Nall was formerly with Standard Fruit and Steamship Co.

The Middle West Soil Improvement Committee voted to join the National Plant Food Institute in the latter's broad program of developing the fertilizer market potential throughout the U.S. In a subsequent move, the NPFI accepted the Middle West group and the effective date for the merge was set for Jan. 1, 1958. Zenas H. Beers, executive secretary of MWSIC will become midwestern regional director of NPFI on that date.

Pesticide manufacturers were given until Dec. 31 to submit their views on a proposed amendment to regulations for labeling various pesticides. Under the provisions of the proposed law, no label would be accepted that directly or indirectly implies recommendations or endorsement of products or their ingredients by any federal agency.

A seven point program designed to boost fertilizer use in the South by some 7.8 million tons over a period of ten years, was presented by Dr. Russell Coleman, executive vice president of the National Plant Food Institute, at the Southeastern Fertilizer Conference held in Atlanta. He said the tonnage target for the program is based on a "realistic potential."

Results of agronomic research work were reviewed by speakers at the second annual Southern Soil Fertility Conference held at Atlanta Nov. 1. The conference was sponsored by the Southern Soil Research Committee of the National Plant Food Institute.

The National Plant Food Institute held a conference on chemical control problems at Washington, D.C. In charge of Dr. Vincent Sauchelli, NPFI scientist, the meeting heard discussions of modern methods of quality control in the manufacture of fertilizers.

A two-day session which included talks on many angles of safety in the fertilizer manufacturing field was held by the fertilizer section of the National Safety Council at Chicago Oct. 21-22. George F. Dietz, safety director, Fertilizer Manufacturing Cooperative, Inc., Baltimore, was elected chairman of the section.

Three appointments by the National Plant Food Institute made in connection with an expanded educational program to cover various regions of the country include Dr. R. L. Beacher, with headquarters at Fayetteville, Ark.; Dr. Samuel L. Tisdale, with offices at Atlanta; and Dr. Richard B. Bahme, with headquarters at San Francisco.

A limited quantity of the new chemical compound, designated ET-57, will be supplied by the Dow Chemical Co., to certain cattle areas of four states to aid in controlling cattle grubs. The product is a systemic insecticide which is given to cattle internally. Some observers say it may save cattle growers millions of dollars annually in better meat and hides.

State control officials of fertilizers and pesticides met in Washington for their annual meetings. Paul T. Truitt, executive vice president of the National Plant Food Institute, made a plea for fertilizer consumption figures by materials and grades on a more uniform basis from all states. He suggested that such reports be made quarterly.

The pesticide control officials discussed tentative definitions for pesticides, defoliants and nematocides, as well as making a study of state laws in the light of the Miller amendment to the Food and Drug Act.

Stauffer Chemical Co. announced that its organic phosphate pesticide, Trithion, will be in large-scale production before next crop season. A multi-million-pound a year Trithion plant will be built near Henderson, Nevada, and it is expected to be in operation by February, 1958.

Soil Training Put to Good Use By Texas Farm Supply Dealer

By Jess Blair
Croplife Special Writer

Nearly any graduate from an agricultural college can find good opportunities in the growing farm chemical field. An estimated 95% of them, however, become employees of some large firms at a salary. There are very few who strike out for themselves in a business of their own.

One such was Marshall Howard, owner of Howard's Farm Supply Store at Littlefield, Texas. His store has grown from a small, rundown business 10 years ago to one of the busiest of its kind in West Texas. He employs three men besides himself all the time, and during rush seasons the number may be doubled. He sells feed and poultry supplies, fertilizer and other farm chemicals, garden supplies, and is one of the biggest dealers in grass and legume seeds in his area.

Mr. Howard is a former soil scientist. For many years he was a soil surveyor with the U.S. Soil Conservation Service. This was a job that took him to all parts of the state where he made soil surveys, took soil and water samples, made cropping recommendations and trained new personnel. Probably few persons in the state knew as much about West Texas soil problems as Marshall Howard.

Finally came a day when he decided to strike out for himself, to leave a well-paying job for a business of his own.

He bought a small store at Littlefield, which is only 50 miles from his former headquarters.

"From the first, I felt like my technical training and experience in soils could be used in promoting the business," Mr. Howard said. "I started doing the same things a county agent does; that is, visiting farmers, helping with cropping problems and promoting the use of legumes to build the soil."

About five years ago when grass farming came to West Texas, Mr. Howard was already on the ground floor. He had pioneered much of it, and now he really started cashing in on buying and selling grass seed, some of which sells for several dollars a pound.

He showed farmers how to prepare the land, adjust planter boxes and drills, and how much seed to plant. He sold them the seed, then was back out there at harvest time to give instructions on how to cut and thresh the crop.

As a result of this personal help, he now handles about three fourths of the grass seed business in his area. This comprises one of the most profitable items of the business. And since the government has spurred even more grass plantings, Marshall Howard is cashing in on the trend. He not only sells grass seed for planting, but buys it back, cleans it with his seed cleaners and then sells it to many parts of Texas and New Mexico.

Mr. Howard also helped start another trend, that of using commercial fertilizer in his county. When irrigation began putting a greater strain on the soil, he knew that large yields could not be maintained without fertilizer. Here again experience was used to build more sales. Before selling fertilizer to a farmer, Mr. Howard first took soil samples and had them analyzed. Then he made recommendations as to the kind and amount to use.

He sells a large tonnage of nitrogen and phosphorus fertilizer, in addition to many small amounts to gardeners and suburban farmers of the town. Insecticides also enjoy a large sale, especially during the cotton growing season. Sales of herbicides to farmers have more than doubled the last three years. Many wheat farmers now spray the weedy spots to eliminate weeds, while another use has been the defoliation of cotton leaves so the bolls will open sooner in the autumn.

"A dealer should know something about these chemicals," said Mr. Howard. "I know a lot of fertilizer in this country has been wasted because neither the farmer nor the dealer knew its use or how to apply it. Our main interest is in getting larger yields, so we must know exactly what kind is needed. If the farmer gets a 20 or 25% increase in his crop, then we get his business from then on, and he tells his neighbors about it."

Though his experience helped in building the business, Mr. Howard knows that this is not enough. A business must be operated efficiently; the store must be kept clean and attractive, and a good advertising program must be followed.

Mr. Howard's store is a nice, well-arranged place. He uses the front part for garden and poultry supplies, small farm items, pet foods, packaged fertilizer and many other items. The back part of the large Quonset type building is divided into compartments for agricultural chemicals and other bulk items.

He uses many island and wall displays and keeps colorful posters advertising the various brand names. He also uses the sidewalk in front for seasonal displays, which may range from grass seed and fertilizer to lawn mowers or irrigation tools.

The advertising budget is based on sales, and usually amounts to one-half to one per cent of the total. In one year Mr. Howard estimates that he spends about $1,500 for advertising.

In addition to radio and newspaper advertising, he has learned that large

PERSONAL SERVICE—Marshall Howard, owner of Howard's Farm Supply Store, Littlefield, Texas, is using his experiences as a former soil scientist with the U.S. Department of Agriculture to good advantage in his store. Personal service, liberal advertising, and a desire to improve agriculture in his county are factors which have contributed to the success of the business.

ighway signs are quite effective. ow on either of the two main high- ays leading into town and two or ree other paved roads, one can see e large rectangular signs directing em to Howard's.

Another type of advertising that ys off is the give-away item. He s several hundred large calendars inted each year to give to custom- s. These have farm scenes and the me of the FFA chapters of the unty, because Mr. Howard works osely with these agricultural stu- nts on feeding and crop projects.

He also gives away novelties, such s matches, small grain scoops, ther- ometers and other usable items. lso along with these free items is is policy of loaning small equipment.

He has several small fertilizer distributors which he loans to customers to be used on lawns and gardens. Though there is no charge for this service, he does keep close records and insists that the items be returned on time so others may use them.

Mr. Howard has never regretted ntering business for himself. Not nly has he profited immensely with , but he has been able to take root a nice town and stay at home with is family. Instead of a wandering cientist he has become one of the gricultural leaders of his area and as contributed greatly to the im- rovement of farming practices.

Texas Dealer Says Old Customers Sell New Ones

Farmers like to talk, to exchange nformation and experience; and they elieve what they see.

W. R. Cook, owner of the Jackson County Feed Co., Edna, Texas, utilizes these characteristics to sell fertilizer, sales of which run to around 70,000 lb. a month, except during off-season periods.

"We inherited some fertilizer business when we bought this store," Mr. Cook explains, "but it wasn't enough to crow about. We realized that if we were to make any profit from fertilizer sales, we must have more business, so we set about to sell on the basis of showing prospects what fertilizer was doing for their neighbors."

He became familiar with the farms of his fertilizer customers and with the various crops they fertilized. He watched the progress of these fertilized crops, and when he saw that a certain crop was showing exceptional promise, he visited with one or more neighbors of the farmer using the fertilizer and asked them to see for themselves the results of fertilizing.

When Mr. Cook sold fertilizer to a farmer in an area where he had no customers, he did the same thing: When the crops were looking good, in comparison to nearby unfertilized crops, he visited with the customer and his neighbors and urged the neighbors to check the fertilized land.

"Invariably, when we land one good customer in a specific neighborhood, we sell several others," Mr. Cook says, "because there's no better way in the world of convincing a farmer that his land needs fertilizer than to show him what fertilizer is doing on his neighbor's land."

Mr. Cook has been able to make some inroads among local ranch owners by working the same way—selling one and inviting neighbors to see the results. He believes there is a bright future for the fertilizer dealer in the sale of fertilizers and weed killers to ranch owners.

Once he interests a prospect in fertilizers, Mr. Cook takes soil samples and has them analyzed, to be certain that he recommends the proper fertilizer. He says this is vitally important, for the wrong fertilizer produces unsatisfactory results and not only loses future business from the new customers but from neighbors, too.

FARM SERVICE DATA

Extension Station Reports

If soil test results don't turn out as expected, there may be a reason.

W. F. Bennett, in charge of the soil testing laboratory, Texas A&M College, says oftentimes when results don't turn out as they should, it's due to an improper balance caused by changes in the recommendations or when they're not completely followed.

Mr. Bennett says without the proper nutrient balance, fertilizers will not be as profitable. Lack of other necessary practices such as control of weeds, insects or disease could give poor results also. Other reasons given are acid soils where plant nutrients are not available freely to plants.

So his suggestion is to have the soil tested, then follow the recommendations carefully for best results. Farmers can get more for the dollar spent for having their soil tested than for any other dollar spent on producing a crop. The county agricultural agent, vocational ag teacher or soil conservation service representative can help the farmer or show him how to take a soil sample and send it.

★

Weigh production of corn, cotton and pastures against fertilizer used, W. R. Thompson, Mississippi extension agronomist, advises.

"If a farmer used the average recommended rate of fertilizer this year, he can see what results he got while crops were being harvested," Mr. Thompson said.

"Many things enter into crop production, but fertilizer is one of the most important. Without it, farmers will find many areas are not profitable."

As farmers compare corn and cotton yields to fertilizer used, Mr. Thompson urges that they check on pastures too.

During this average pasture production year, farmers can tell if their pastures made them a profit without fertilizer or with the amount used.

Fertilization is particularly recommended by Mr. Thompson for pastures on dairy farms. The exceptions to this recommendation are pastures in some areas of the Delta and on special areas on some farms.

The agronomist suggests farmers make a financial program for fertilizer just as banks make a financial program for their institution. This plan will include ways of making interest through increased production on money spent for fertilizer.

If farmers will note poor production received with no fertilizer, Mr. Thompson believes, they will agree with him that they can afford to fertilize.

He recommends that they study average fertilizer recommendations of experiment stations and the increase the fertilizer will give.

★

The efficient use of lime is an important consideration when planning crops to be seeded in the spring, according to Joseph N. Matthews, assistant agronomist, University of Tennessee Agricultural Extension Service. In Tennessee lime is used largely to neutralize soil acids. Although plants vary widely in their tolerance to acidity, a suitable pH range for most crops grown in Tennessee is from 6.0 to 6.5 This generally means that applications of lime are necessary on most farms if high production is to be secured and maintained, Mr. Matthews says.

It takes lime approximately two to four months to correct the acid condition of the soil; therefore, Mr. Matthews reminds, it should be applied at least that far in advance of spring seeding.

★

Shinnery oak on rangeland can be effectively controlled by the repeated use of 2,4,5-T and 2,4,5-TP, according to tests carried out by the Spur, Texas, Experiment Station.

In treating test plots with two applications of the chemicals, research workers got an 80 to 90% kill. Both chemicals seem to be about equal in effectiveness.

Cecil Meadors and Earl Robison, members of the staff, said that the chemicals' cost will be more than offset by the increased amount of grass which can be grown.

The staff is testing new materials each year in an effort to lower the cost. Using the present chemicals and putting on two applications average about $8 an acre.

★

The amount of plant food removed from the soil by a crop is one index, but not the only one, to the amount of fertilizer to apply.

W. W. Moschler, assistant agronomist at Virginia Polytechnic Institute Agricultural Experiment Station, says the amount of fertilizer farmers are advised to use is the amount which has produced the highest yields at the least cost in carefully controlled tests. The amount of fertilizer actually contained in the hay when it is cut is not always closely related to the amount applied.

Mr. Moschler says scientists gain interesting and useful information from analysis of crops. Much research is aimed at finding why all the elements contained in fertilizer cannot be absorbed by plants? what new fertilizer compounds might be easier to absorb? what are the soil properties that influence the solubility of the fertilizer? and, are plants alike in their ability to use fertilizer?

Plant scientists have analyzed all the important crop plants. The Virginia station has just finished a report which shows the fertilizer elements contained per ton of hay in each of 11 cuttings of alfalfa over a three-year period. About 100 pounds of nitrogen, 15 pounds of phosphate, and 50 pounds of potash were found in each ton of cured hay.

The amount of phosphorus contained in a ton of hay was practically the same regardless of how much phosphate fertilizer was applied. The percentage of phosphorus in the plant is relatively stable and does not vary over a very wide range. The plant seems to say that this much phosphorus is needed for healthy growth—not much more and not much less. The only effect of applying too little phosphate fertilizer is a smaller yield.

The potassium content of the hay varied widely, depending on how much was available to the plant from the soil or from the fertilizer applied. The potassium in the hay ranged from 30 to 60 lb. per ton, with an average of about 50.

A ton of alfalfa hay also was found to contain 50 to 60 lb. of calcium which was taken from the soil, and from lime which had been applied to the soil.

★

One practice that will pay big money on next year's cotton crop is to destroy cotton stalks early. H. A. Turney, extension entomologist at Texas A&M College, says that early destruction of cotton stalks and bolls not only adds to the reduction of cotton insect winter carryover, but it meets the recommended soil improvement practices. He points to tests which show that certain power operated stalk shredders kill up to 70% of the pink bollworm larvae during the shredding operation.

Stalk destruction is important, too, he says, because the pink bollworm is the only major cotton insect that passes the winter in the larval stage in old bolls and locks left in the field or in seed cotton taken from the field.

★

Yellow-dwarf virus, with its ability to cut yields as much as 70 to 80%, must be classed as a major cereal crops disease, says U.S. Department of Agriculture agronomist Coit A. Suneson, at the University of California, Davis.

He and USDA geneticist, R. T. Ramage, also at Davis, from tests over a six-year period, found that this yield reduction is particularly high in late-sown cereals—those sown after mid-January. Crops planted in November or December showed an average yield reduction of some 25%.

"Barley, oats, and wheat are about equally susceptible to this aphid-borne virus disease," said Suneson. "However, barley varieties grown in California tend to be more resistant than North American barleys in general."

In all the tests, both early- and late-planted cereals were artificially infected with the disease by turning loose large numbers of aphid carriers in the fields.

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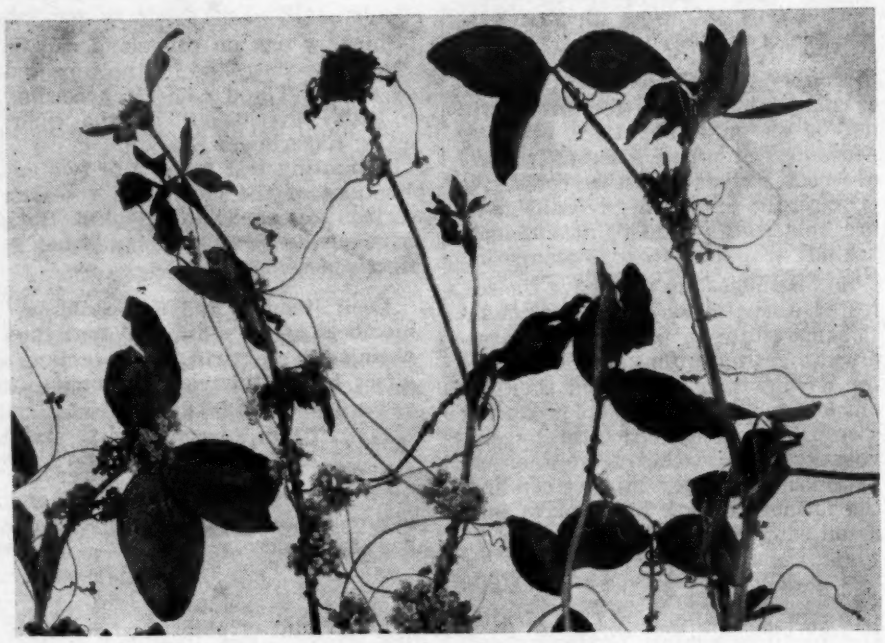


DODDER

How to Identify

When it becomes large enough to be noticeable, dodder is a slender, twining parasitic plant with long curling leafless stems. Color of the stems are usually yellowish or orange, but are sometimes tinged with red or purple and occasionally are almost white. The tiny flowers occur in massed clusters from early June until the time of frost. Small gray-to-reddish-brown seeds are produced abundantly, a single plant being capable of maturing upwards of three thousand. Seeds ripen from July until frost, but during occasional adverse seasons no flowers are formed.

Losses Caused by Dodder

This is a parasitic plant, infesting clover and alfalfa chiefly. However, a number of other cultivated crops are subject to infestation by dodder. The most important of these are sugar beets, onions and flax. Its appearance in the U.S. is noted in all regions in which clover and alfalfa are raised for seed. The USDA says that although dodder is a noxious weed, it is not to be feared in the U.S. to the degree that it has been in Europe. In the latter place, particularly in parts of Germany, production of clover seed is known to have been abandoned because of this parasitic plant.

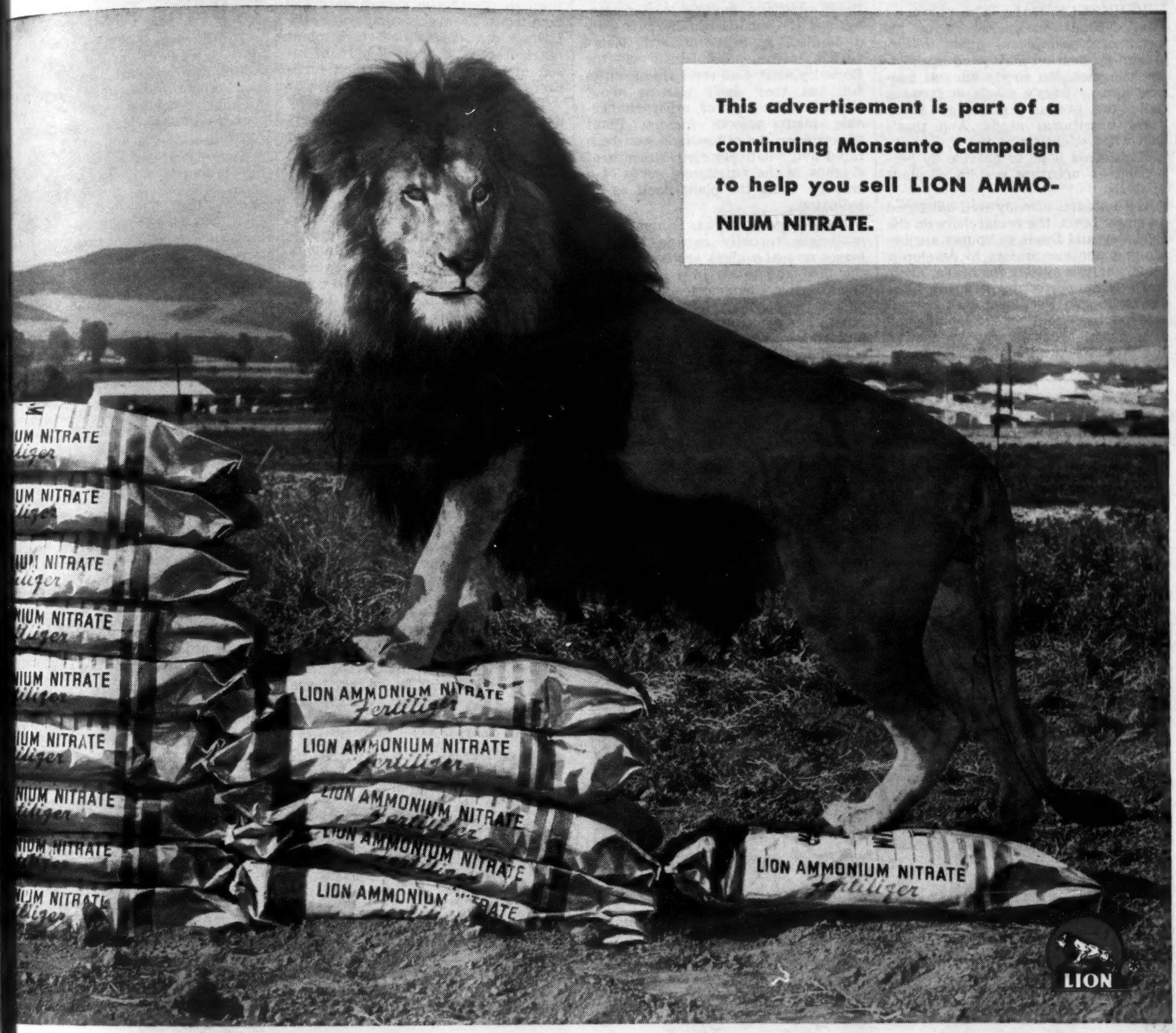
Life History of Dodder

All dodders reproduce from seed. After germination, the seed uses up all its stored-up food in the production of the slender shoot. This leafless, nearly rootless stem rotates until it comes in contact with a congenial host, such as clover. (Some species may attack almost any plant growing in the field.) It leaves this temporary host as soon as it can climb within reaching distance of nearby clover or alfalfa. In case a suitable contact is not established, the temporary stem lies dormant on the soil for four or five weeks and then dies. When a suitable host is encountered, however, the dodder encircles it and obtains nutrition by sinking minute suckers into the food-conducting tissues of the host and stealing its food. The base of the dodder soon shrivels and dries, thus losing all connection with the ground. As the plant grows, it reaches for neighboring host plants and moves out in an ever-increasing circle of infestation. The clover plants first attacked die, as does the dodder feeding on them, but the parasite living on newly-attacked clover continues to live and to drop seed which soon germinates and continues the attack.

Control of Dodder

Chemicals may be used in controlling this parasitic weed, but local authorities should be consulted before any herbicide is applied on crops to be used for feed, forage, or for human consumption. Cultural means of control have been suggested by USDA, with different recommendations being made for various species of the weed. When fields become so infested that no other method of control is apparent, burning is said to kill not only the existing plants, but also seeds that are lying on the ground.

Illustration of Dodder furnished Croplife through courtesy of U.S. Department of Agriculture, Beltsville, Md.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Three-Year Plant Analysis Project Started in California

BERKELEY, CAL.—The farmer who depends on guesswork or his neighbor's example as guide to fertilizer application may wind up holding the sack (an empty one) at harvest time. Today's precision farming calls for precise knowledge about plant nutritional needs. And that's just what scientists at the University of California hope to provide by perfecting an accurate system of plant analysis.

With studies already well advanced on sugar beets, the researchers on the Berkeley and Davis campuses are beginning another project to develop a plant analysis system for beans. Their work is supported by a grant from the California Fertilizer Assn.

What the scientists are looking for is a quick, accurate way to answer the farmer's questions: Should I fertilize? Which fertilizers should I use? How much should I use? When and how should I apply them? How often should I repeat the application?

Field trials can provide answers to these questions, but it's a long process and the results usually have only a limited application, says Albert Ulrich, plant physiologist, of the Berkeley staff. Soil tests are also useful, but they don't tell us about climatic influences or other changeable plant growth factors. Plant analysis, on the other hand, can be a rapid and relatively simple means of diagnosing the nutritional needs of a crop by using the plant itself as an indicator.

Here's how it works: Sample plant materials (usually certain selected leaves or leaf-stalks) are collected in the field and taken to a laboratory. Quantitative chemical tests are made on the sample material, and the concentration determined for the major nutrients—nitrogen, phosphorus and potassium—and other nutrients such as sulfur, magnesium, calcium and occasionally zinc. Then these nutrient levels in the samples are compared with adequate or "safe" concentrations for plant growth as established through greenhouse experiments and field trials. From this comparison, the farmer can determine which plant nutrients are in short supply in his soil or, in some cases, which fertilizers he is applying too heavily.

This technique is already in use by many sugar beet growers. Commercial laboratories and the research staffs of sugar companies are performing the analyses, and the results thus far have been very encouraging, says Mr. Ulrich.

Planned as a three-year project, the bean studies will begin with laboratory and greenhouse experiments to determine the nutritional requirements of bean plants. Next will come a plant nutritional survey to locate the growing areas where information is needed to correct nutritional problems. Then the scientists will conduct field fertilizer experiments to double-check the results of their laboratory studies under commercial growing conditions. Finally, the information developed will be made available to farm advisors for dissemination to bean growers, commercial service laboratories and the fertilizer industry.

Cooperating with Mr. Ulrich and his associates at Berkeley on this project will be Frederick Hills, extension agronomist, of the Davis Campus, farm advisors in several counties and many commercial bean growers.

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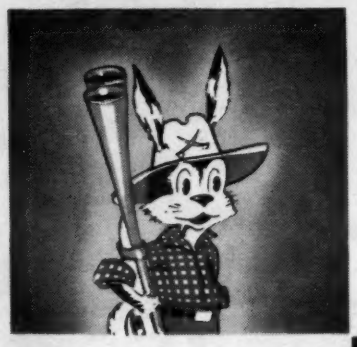

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MOSQUITO CONTROL DIRECTOR

SALT LAKE CITY—T. A. Schoenfeld, president of the Salt Lake City Mosquito Abatement Board, has been named regional director for the northwest central region, American Mosquito Control Assn., Inc.

Volume on Insects That Harm Foods Is Being Prepared

The bureau of biological and physical sciences of the Food and Drug Administration has begun preparation of an authoritative and comprehensive volume on insects and insect fragments which cause the adulteration of foods and drugs.

The material for the book is being prepared and assembled by a team of workers of the division of microbiology. This book, the bureau says, will be the only volume which lays the foundation for the identification of insect fragments and their interpretation as contaminants. It will include:

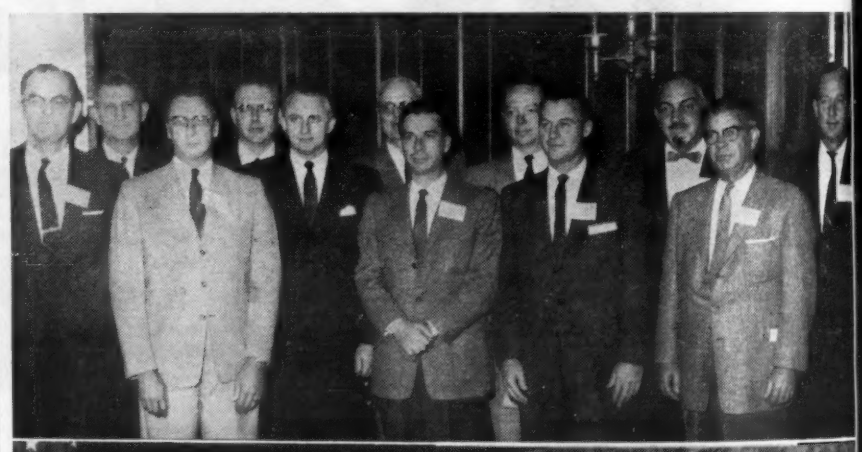
A comprehensive survey of insects—field, plant and storage—which infest food products, with a discussion of routes of adulteration and the significance of various contaminants.

Life cycles and habits, morphology of the whole insects and patterns of fragmentation.

Descriptions and illustrations in micromorphological detail of fragments encountered in adulterated foods and drugs.

Differential characteristics, with profuse photomicrographs and drawings for identification of insect contaminants by their fragments.

The scope and detail of information presented will be useful to the analyst in control, research and agriculture laboratories; to plant sanitarians and control officials; to technical, legal and consumer consultants; and will serve as a reference for those in industry and government.



AT MIDDLE WEST SOIL MEETING—Officers and directors of the Middle West Soil Improvement Committee are pictured above at the group's annual meeting Oct. 31 held at the La Salle Hotel, Chicago. Left to right, they are: Zenas H. Beers, executive secretary of MWSIC; E. T. Potterton, International Minerals & Chemical Corp., Chicago; Merle Blue, Consumers Cooperative, Kansas City, Mo.; C. F. Martin, Miami Fertilizer Co., Dayton, Ohio; Louis Quiram, MWSIC treasurer, Illinois Farm Supply, Chicago, Ill.; Richard E. Bennett, Farm Fertilizers, Inc., Omaha, Neb., MWSIC president; R. A. Garn, Farm Bureau Cooperative of Ohio, Columbus, Ohio; J. D. Stewart, Federal Chemical Co., Louisville, Ky.; Frank Nelson, Rath Packing Co., Waterloo, Iowa; W. W. Venable, Cornland Plant Foods, Grinnell, Iowa; Robert G. Fitzgerald, Smith-Douglass Co., Streator, Ill., MWSIC vice president; and Marshall A. Smith, Smith Agricultural Chemical Co., Columbus, Ohio. Absent when the picture was taken was A. C. Norris, V. W. Norris & Son, Rushville, Ind.

In the lower photo, ballots are counted in the MWSIC's historic decision to join the National Plant Food Institute. Left to right in the picture are: E. T. Potterton, Merle Blue, and Dan Williams, the latter of the Minnesota Farm Bureau, St. Paul. Patricia Davis of the MWSIC office staff, tallies results of the election.

Ralph Jensen

DISTRICT MANAGER — Ralph Jensen has been appointed district manager for the Day Sales Co. and will open the New York City sales office at 77 River St., Hoboken, N.J. The firm distributes Day dust control and bulk material handling equipment manufactured by the Day Co. of Minneapolis. Mr. Jensen will handle sales in the metropolitan New York area. Mr. Jensen was associated with the Day Co. for nine years before his appointment as district manager for the Day Sales Co.

Gloomicides

Smith had bought a house in a newly-developed section. All went well until the severe weather set in and flaws began to appear. Smith, irate, summoned the builder and recited his woes.

"I really can't understand why anything should go wrong," said the contractor. "This isn't hollow-block construction, it's the good old-fashioned kind and should be satisfactory in every way." With evident self-control he continued: "Just what specifically, is your complaint?"

"A very simple one," retorted Smith. "We put the cat in the cellar at night and let her out of the attic in the morning."

★

When the grass looks greener on the other side of the fence, it may be that they take better care of it over there.

★

Art Ryan reports a restaurant in Los Angeles that has just acquired a genuine shrunken head which is displayed prominently above the bar. Underneath the head is a sign:

"My, that WAS a dry martini!"

★

"I have a wonderful idea for increasing trade," the junior member of a millinery firm confided to his partner. "I have arranged to have a scale put in front of the store, so women can weigh themselves free."

"How's that going to sell hats?" asked the senior partner.

"Well, the scale will register about 5 lb. higher than it should. When a woman sees that reading, right away she's going to want something to cheer her up. And there, before her eyes, is a window full of beautiful hats!"

★

About the only thing you get right from the horse's mouth is the horse laugh.

★

Advice from a former New Orleans playboy to his son, on the subject of marriage: "My boy, I've just got two little pieces of advice to give you. First, always reserve the right to spend one night a week out with the boys." He paused and then his son asked for the second piece of advice. He immediately got it: "Don't waste it on the boys!"

★

An old-timer is a man who has never been able to figure out why women still take as much time to dress as they did when they wore clothes.

★

In a small hotel in Ontario, so a traveler relates, there is a yellowing sign tacked to the dingy wall behind the desk by which the proprietor proclaims his fixed inbred skepticism of all humanity. The sign reads: "No checks cashed! Not even good ones!"

★

Current in New York is a tale about a rabbi who was visiting a Jewish restaurant on Manhattan's lower East Side. He was served by a Chinese waiter who made recommendations from the menu and then took his order, all in Yiddish. Following the dinner the rabbi called over the proprietor, an old friend.

"Isn't it extraordinary," he added, "that you have a Chinese waiter who speaks Yiddish?"

The proprietor quickly put a finger to his lips. "Sh-h-h," he said, "he thinks he's learning English."

★

An old-timer is one who remembers when people were more intelligent than machines.

★

A lady with a pain in her side went to see a physician. He told her she had appendicitis and must have an operation. She disliked this diagnosis so she went to another doctor. He told her she had gall bladder trouble and must have an operation. "Where do you go from here?" inquired a friend.

"Back to the first," she declared. "I'd rather have appendicitis."

Speakers Named for WACA Spring Meeting

SAN JOSE, CAL. — The spring meeting of the Western Agricultural Chemicals Assn. will be held in the Hotel Biltmore, Los Angeles.

Dr. Boysie E. Day, assistant plant pathologist, Citrus Experiment Station, University of California at Riverside, will give a progress report on "Weed Control: Promising New Chemical Compounds." J. Earl Coke, vice president, agriculture, Bank of America, San Francisco, will discuss "Western Agriculture: A Look at the Future."

Dr. J. T. Thurston will address the group on "Agricultural Chemicals Research in Basic Industry." Dr. Thurston is the assistant general manager of the phosphates and nitrogen division of American Cyanamid Co., New York. He was formerly an administrator in Cyanamid's Stamford, Conn., laboratories.

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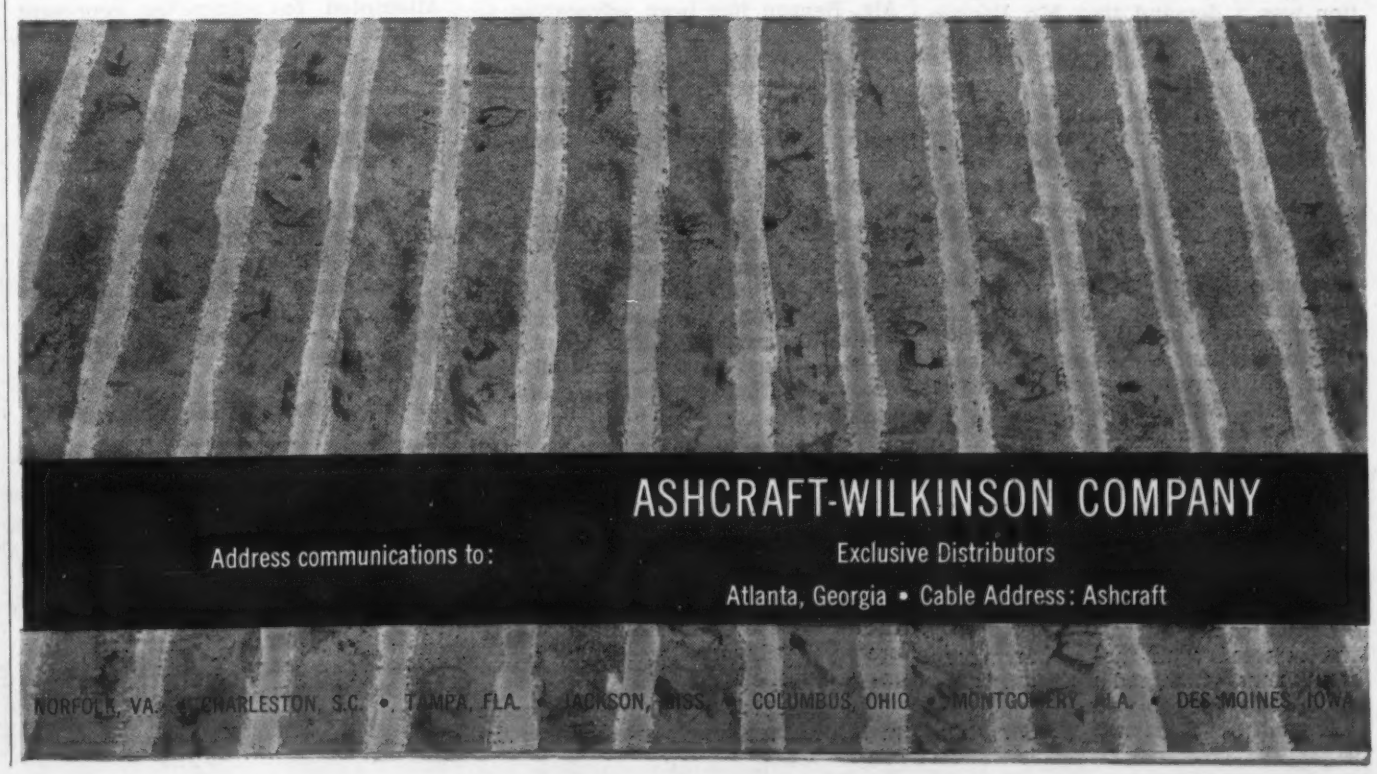
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NATIONAL FERTILIZER SOLUTIONS ASSN.—Officers, directors, and a number of important program participants in the NFSA meeting in Cincinnati Nov. 17-19 are shown, with all identified from left to right unless otherwise specified.

Top row: new officers: George H. Serviss, G.L.F. Exchange, Ithaca, N.Y., secretary; Richard Cecil, Bartlett & O'Bryan Fertilizer Co., Owensboro, Ky., president; John L. Wilson, Semo Liquid Fertilizers, Inc., Charleston, Mo., treasurer; and William B. Parrish, William B. Parrish Co., Auburn, Ill., vice president.

Second photo, directors: front row: E. E. Crouse, U.S. Liquid Fertilizer Co., Indianapolis, Ind.; Hugh S. Surles, Jr., Planters Cotton Oil & Fertilizer Co., Rocky Mount, N.C.; Mr. Parrish; Mr. Serviss; O. L. Ohnstad, Ohio Liquid Fertilizer, Inc., S. Solon, Ohio; and Mr. Cecil. Back row: Wayne R. Johnson, Johnson Brothers Mills, Shennandoah, Iowa; William B. Spargur, Delavan Mfg. Co., West Des Moines, Iowa; Donald Foster, Foster Nitrogen Solutions, Ottawa, Ohio; Ernest M. Harper, Allied Chemical & Dye Corp., New York; Mr. Wilson; and Donald R. Weber, Spraying Systems Co., Bellwood, Ill. Other directors were elected but were not present for a picture. (These were listed in a story starting on page 1 of Nov. 25 Croplife.)

Third picture: A group of panelists, starting with Mr. Crouse, standing; W. R. Bone, Monsanto Chemical Co., St. Louis; Dean Gidney, U.S. Potash Co., N.Y.; and H. H. Tucker, Sohio Chemical Co., Lima, Ohio.

Last photo, top row, Howard R. Lathrope, Nitrogen Div., Allied Chemical & Dye Corp.

Lower row: Seated: Dr. Edwin F. Alder, Eli Lilly & Co., Greenfield, Ind.; Dr. E. J. Haertl, Dow Chemical Co., Midland, Mich.; and C. A. Hamsher, Allied Chemical & Dye Corp., N.Y. Standing is R. D. Ellsworth, U.S. Liquid Fertilizer Corp., Indianapolis. Second shot, O. L. Ohnstad, Ohio Liquid Fertilizer, Inc., S. Solon, Ohio, and Ralph Everett, Empire Sales Training Center, Buffalo, N.Y.

Picture No. 3, Mrs. Minita Westcott, Storms & Westcott, Chicago; and final photo, seated: Dr. John K. Pfahl, Ohio State University, Columbus; Dr. Gordon Ryder, Ohio State; and Dr. John W. Sharp, Ohio State. Standing is Ernest M. Harper, Allied Chemical & Dye, N.Y.

POLITICS AND AGRICULTURE:

Benson Will Remain at USDA Despite Resignation Demands

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON — After what has been described as a touch-and-go situation, it can now be revealed that Ezra Taft Benson will remain as secretary of agriculture at least through the forthcoming session of Congress, unless he himself decides he has had enough and turns in his resignation.

This news item reflects reliable information obtained from persons close to Mr. Benson. The subsequent news last week about the illness of the President may ultimately call this decision into review.

In its issues of Oct. 21 and Nov. 11 Croplife drew attention to the rising tide of opposition to Mr. Benson among GOP politicians. The culmination was a demand that Mr. Benson be replaced immediately. The news revealed that an influential clique was operating in an attempt to drag the secretary from his cabinet seat.

Benson supporters were faced with formidable opposition but they rallied to his defense and have prevented what can best be described as "political assassination."

The reception that Mr. Benson's recommendations receive from the national legislature may encourage his opposition to renew its attacks. The opposition, one observer suggests, will appraise the reaction in the corn belt during the congressional session and immediately after it adjourns, and if the results appear to reflect a continuing slide against the administration, then the supporters of Mr. Benson may find themselves unable to fight off renewed demands that he be sacrificed.

The campaign of opposition gained ground steadily up to the past week and infected even the big farm organizations which had previously supported Mr. Benson with vigor.

It had been learned earlier that one of the conservative farm groups took the name of a possible successor to the Benson post to the White House. The representatives were told that the name offered would not be acceptable. What was not made public at the time was that the White House spokesman repulsed the suggestion with a statement that Mr. Benson would remain.

Another farm organization, reputedly close to Mr. Benson, was also reported to be making inquiries about a possible successor as head of the U.S. Department of Agriculture.

Policy Will Go Forward

Thus the administration ranks have been reformed on the farm front and the expectation is that it will go before Congress with policy recommendations based on the gospel which Mr. Benson has been advocating so consistently.

This will mean a request that Congress reject the flexible price support schedule of the present farm law with its 75-90% of parity supports for the basic commodities.

It must be expected that Mr. Benson will ask discretionary price support limits for the basic commodities, and even possibly the use of cross-compliance with acreage allotments on other crops which have been invading the acreage taken out of production. This, in turn, created surpluses in other commodity groups—feed grains.

Congressional Fight Seen

What seems assured now is a major farm fight in both chambers of Congress with Mr. Benson's greatest strength in the Senate. Sen. George D. Aiken (R., Vt.) and Sen. Clinton P. Anderson (D., N.M.) will lead the driving force to maintain and increase the Benson demand for sanity in farm policies.

On the House side, where some members face tough re-election campaigns in 1958, Mr. Benson may be in for some tough sledding, with only token support from his party leaders.

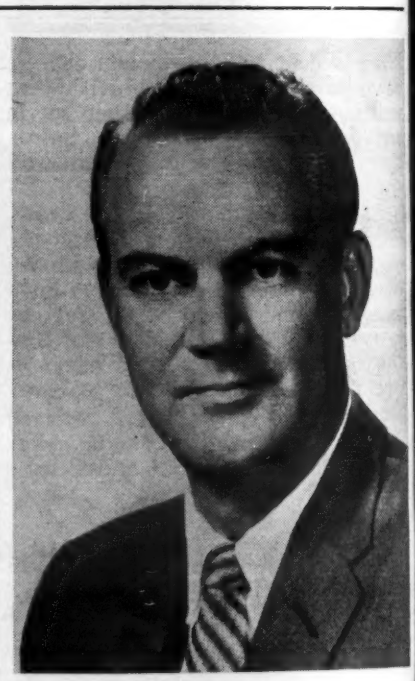
The coming session of Congress will be a test of the accuracy of political estimates of the attitude of farmers. It has been asserted in consequential circles in Washington that state and national politicians are completely out of step with farmers. These observers say that it is probably true that the great majority of farmers "hate" Mr. Benson, but by far the largest majority of these Benson-hating producers also privately admit that he is right. The test will come when the farmer decides whether to follow his heart or his head as Congress proceeds to attack Mr. Benson.

Had the "plot" to get rid of Mr. Benson succeeded, it is unlikely that his successor would have offered any major changes in the policies recommended by Mr. Benson. He has been operating within the legal framework established by Democratic administrations. He accepted innovations—the Soil Bank is an example—as a concession to the opposition. But even the changes which he accepted and attempted to administer represent pitfalls for the Democrats themselves through their own conniving.

Thus the die has been cast and it remains to be seen if Mr. Benson is to be the whipping boy of Congress at the next session. The end result may be that he will then decide to retire of his own volition. On the other hand, he could gain strength through enlightened farm support and cause national farm politicians to bow to his crusading insistence that his policies are those which can lead the farmer back along the road of freedom of action, and to better prices for his products in the market place.

PLANTING OATS

GAINESVILLE, FLA. — Moisture conditions were favorable for planting oats, and Alachua County farmers are planting about 18,000 acres this season, mostly for grazing, according to Loonis Blitch, county agent. He says the acreage of lupine planted this fall is much smaller than in previous years due to poor growth made by this crop in the last two seasons.



H. Carl Wiggins

JOINS BRADLEY & BAKER — H. Carl Wiggins has joined Bradley & Baker, national sales agent, as sales representative in Atlanta, Ga. Mr. Wiggins will cover the states of Georgia and South Carolina. Mr. Wiggins, a graduate of Auburn, was previously with the American Agricultural Chemical Co. in Birmingham, Ala.

Kansas Fertilizer Meeting Scheduled

MANHATTAN, KANSAS—The department of agronomy, Kansas State College, will sponsor its tenth annual fertilizer conference Dec. 9-10. Registration will begin at 1 p.m. Dec. 9. The registration and daytime meetings will be held in Williams Auditorium of Umberger Hall. There will be a banquet the evening of Dec. 9 in the new Student Union Building on the campus.

Results of the 1957 fertilizer trials will be presented for all crops. Much of this research has dealt with the question of water solubility of phosphorus and its significance to crop response.

USDA RESEARCH GROUPS

(Continued from page 1)

thology and insect physiology, in he Entomology Research Division. ioneering research groups in a umber of other Agricultural Re earch Service divisions are being lanned.

Commenting on the research units, . Shaw said: "Scientific facts and inciples are the starting points for aginative processes that lead to w things and new ways of doing ings. The thinking, observation, ex- rimentation, and analysis necessary establish new facts and principles e what we mean by 'basic research.'

"Our advisors outside the depart- ent, as well as USDA research ople themselves, believe that we ve not been doing enough basic search. The tremendous recent ad- nces in farming and in agricultural dustry are largely the result of sic scientific discoveries made years o. For some time now we have en scraping the bottom of the basic- search barrel. To find answers to e problems of today's and tomor- w's agriculture, we'll have to push ndamental knowledge ahead faster.

"The pioneering research groups we are setting up will help to meet this need for more basic research —research that is not concerned with solution of immediate prob- lems, but rather with broadening and deepening man's understanding of the physical world and of life processes. We are confident that these groups will encourage the freer play of genius in agricultur- al research. The new facts they dis- cover will make all our applied re- search more effective."

Pioneering research units, Dr. Shaw id, are to be established only in ubject-matter fields for which re- earch funds have been authorized, nd in which it can be expected that ew basic findings will substantially dvance agricultural science.

Dr. Shaw emphasized that the new roups will do only a part of the basic esearch undertaken by the Agricul- ural Research Service. The regular esearch divisions will continue, as at resent, to plan and carry out funda- ental investigations aimed at sup- lying new scientific facts and prin- iples recognized as needed to solve articular agricultural research prob- ems.

In the memorandum on pioneering esearch sent last May to the direc- ors of Agricultural Research Service ivisions, Dr. Shaw pointed out that all research in the department is, nd should be, directed toward help- ng agriculture perform its role—by olving current problems, anticipat- ng and averting future problems, nd creating new and better things or and from agriculture."

He emphasized, however, that the uccess of problem-solving research epends fundamentally on new scien- ific discoveries. He pointed to the eed for "research that is not aimed t specific, practical problems or ob- ectives, but rather at the advance- ent of science. Only in this way . . . an the scientist have the freedom e needs to follow where the re- earch trail leads and find the un- ooked-for."

"Obviously," Dr. Shaw added, "such ndirected' research can be entrust- d by those responsible for use of pub- c funds only to scientists who are ully competent to accept this trust."

Dr. Sterling B. Hendricks and Dr. Harry A. Borthwick are two of the USDA scientists selected for pioneering research duties.

Dr. Hendricks, chief chemist of the ioneering laboratory for mineral nu- rition, is widely known for his con- ributions to soil science and min- ralogy, plant physiology, and chem- try. A member of the National cademy of Sciences, he is a 30-year veteran of the department. Dr. Hen- dricks and his associates will work in the direction of developing a bet- ter understanding of processes related to the mineral nutrition of plants. At the outset this research will involve studies of how plants accumulate in- organic ions, and how these ions func- tion inside plants.

Dr. Borthwick is assigned to the pioneering laboratory for plant phy- siology. He is the co-discoverer with Dr. Hendricks of the fact that light- sensitive pigments control flowering, seed germination and other behavior of many plants that exhibit the phenomenon known as photoperiod- ism. Dr. Borthwick is internationally recognized as an authority on photo- periodism in plants and has done ex- tensive research in related fields of plant growth and development.

Hooker Elects New President, Other Officers

NIAGARA FALLS, N.Y.—Directors of Hooker Electrochemical Co. elect- ed Thomas E. Moffitt president on Nov. 20. He succeeds Bjarne Klaus- sen who will continue as a director and who had served for nearly a year beyond the company's normal retire- ment age of 65 by special request of the board. Mr. Moffitt had been a di- rector and executive vice president since January, 1956.

During the same board meeting, the directors also voted several other changes. Ansley Wilcox 2d, who has been secretary and general counsel, was in addition elected a vice presi- dent. Thomas F. Willers was elected a vice president and treasurer and will also continue as comptroller. Dennis A. Riordan, formerly treas- urer, plans to retire. Mr. Willers, who had been assistant treasurer, succeeds him in this position.

John F. Snyder retires as vice president but will remain as director and member of the finance commit- tee. J. Clarke Cassidy, a director and former vice president, has been ap- pointed to the finance committee, of which Edwin R. Bartlett is chairman. R. Lindley Murray continues as board chairman and chief executive officer.

Canadian Fertilizer Sales Rise Slightly

WINNIPEG — Domestic sales of mixed fertilizers and fertilizer mate- rials in Canada for the 12 months ending June 30 this year amounted to 808,251 tons compared with 800,- 681 in 1956 according to a current report released by the Dominion Bu- reau of Statistics. The year's sales of mixtures in Canada totaled 651,754 tons for the 12 months, compared with 652,643 in the same period a year ago while exports amounted to 49,728 tons compared with the previous year's 38,346-ton total.

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A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

Profits Still Key to Pesticide Business Growth

While no one would go on record as being opposed to making a fair profit in the pesticide business, at the same time many products in the field are sold on the basis of price alone. Obviously, such a condition is bad for any firm's fiscal record, but it also results in a downward spiral which hurts the farmer as well as the pesticide seller.

This point has been brought out very clearly in conversations with many in the pesticide industry, but others are talking about it too. Dr. William A. Harvey, University of California weed expert, declares that short profits deprive the industry of achieving its growth potential, and beyond that does the farmer a disservice in not being able to afford the necessary follow-through to see that the products are applied properly.

Because of operating on a basis of "I'll sell it cheaper than my competitor," the buyer regards pesticides as a sort of economic football and postpones purchasing anything until all of the salesmen have had an opportunity to trim a little more off the price. "It leads to missed sales, eliminates the possibility of off-season deliveries, and intensifies the pressure at peak season," one observer notes.

On the positive side, however, it is gratifying to see a trend away from consignment selling, drastic price-cutting and other ills that have beset the pesticide business for years. An increasing number of firms are laying 1958 sales plans on a more solid foundation of cash for the product, rather than on a haphazard basis of payment much later, if at all.

With cash invested in an inventory, a dealer or distributor is much more interested in moving the goods out, and it is manifest that the merchandising efforts on insecticides, weed killers and fungicides, will be stepped up to a large degree when additional firms find it possible to adopt more favorable business practices.

With a better profit picture, it will be possible to supervise more closely the manner in which the farmer uses the material for pest control on his fields. This in turn will result in fewer misapplications and less blaming of the materials for failure to do a job.

The spiral could well begin a faster upward ascent with the introduction of better sales practices in the industry.

Music Stirs Plant Growth As Farmers Fiddle Around?

The sage of long ago who remarked that "Music hath charms," probably had no idea of including the botanical world in his statement. By the same token, manufacturers of plant growth materials probably need not worry about going out of business on the basis of reports coming out of India that music can make certain plants grow faster.

According to stories from that country, it is entirely possible to make plants grow taller with more vigor, through exposing them to musical strains between 6 and 7 a. m. Some serenaded experimental plants grew to twice the height of checks, it is claimed.

The chief experimenter in growing contented plants via the violin, and other instruments is Dr. T. C. N. Singh, head of the department of botany, Annamalai University, Annamalainagar, South India. With his collaborator, Miss Stella-Ponniah, he has made numerous tests on a number of plants including peppers, balsam, tapioca, petunia, cosmos, sugarcane, onion, sweet potatoes and garlic. (Playing romantic music to sugarcane and sweet potatoes isn't so hard to imagine, but when it comes to garlic. . . .)

At any rate, it is indicated that over a period of weeks, a violin was played for 25 minutes daily between 6 and 7 a. m., serenading specimens of Mimosa pudica, L., a "sensitive" plant. By the end of the dosing period, the report declares, these musically-treated plants had grown to four times their original height, while control plants, untouched by the melodious experiment, only doubled in height.

Other evidences of how the music affected the plant is seen in the number of prickles on the experimental plants, which the report says was 45% greater on those exposed to the strains of the fiddling farmer. Branching was said to be more profuse and branch spread was "noticeably wider," the report states. Furthermore, the length of branches of the experimental plants was 50% greater than on the control plants, and leaf production was 5 times greater.

In another test, a veena (Indian stringed instrument) was played in the presence of a group of pepper plants daily for several weeks. This is said to have resulted in the plants increasing 90% in height, 120% in leaf production, 50% in diameter of stem, and 103% in fruit yield as compared to control plants which apparently went on a growth strike at being excluded from the cultural program.

We hardly think that musical artists, seeking a responsive audience, would be likely to select a semi-circle of potted plants as hearers, even if after five or six weeks of intensive playing it could be proved that the stem had grown a couple of inches longer than it would have grown had they not rendered their melodic tunes.

Should these experiments prove practical on big scale plots, we can visualize a radical switch in farming operations, where the farmer arises with the buzz of his alarm clock, grabs his violin, and makes for the corn field to play a few well-chosen numbers to the stalks before breakfast. (We suggest corn as being a practical musical target since it is one of the few plants that actually has ears.)

While modern-day citizens are conditioned not to spoof at any scientific ideas, no matter how fantastic they may sound on the surface, we rather doubt if the present generation of fertilizer producers need worry about the farmer's turning his radio volume up so loudly that crops will grow rapidly without benefit of additional plant nutrients.

Dr. Singh may continue his search for a plant that dotes on notes, but the American farmer knows that it's wiser to depend on fertilizer. It is doubtful if a crop can thrive on jive.

Maintaining Perspective

"Artificial lighting is an attempt to interfere with the divine plan of the world, which calls for dark during the night time. Emanations of illuminating gas are injurious. Lighted streets will incline people to remain outdoors, thus leading to increase of ailments by colds. The fear of darkness will vanish, and drunkeness and depravity will increase."—Quoted from 1816 edition of a New England paper by Dr. M. P. Ethridge, president of the Association of Official Agricultural Chemists at a recent meeting.

It would be interesting to see how some of today's pessimists might appear to the people of 2100 A.D. in relation to attitudes toward crop production and scientific advances in the agricultural field.

Croplife's Home Office

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MEETING MEMOS

1958

Oct. 22-24—Pacific Northwest Plant Food Assn., Annual Meeting, Gearhart, Ore., Leon S. Jackson, P.O. Box 4623, Sellwood-Moreland Station, Portland, Ore., secretary.

July 8-10—Pacific Northwest Plant Food Assn., Ninth Annual Regional Fertilizer Conference, Pocatello, Idaho.

April 22 — Western Agricultural Chemicals Assn., Spring Meeting, Hotel Biltmore, Los Angeles; C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., executive secretary.

EDITOR'S NOTE — The listings above are appearing in this column for the first time this week.

Dec. 2-5—Entomological Society of America, 5th Annual Meeting, Hotel Peabody, Memphis, Tenn., R. H. Nelson, 1530 P St., N.W., Washington 5, D.C., Executive Secretary.

Dec. 2-5—Cotton States Branch, Entomological Society of America, 32nd Annual Meeting, Hotel Peabody, Memphis, Tenn., M. E. Merkl, Box 202, Leland, Miss., Secretary-Treasurer.

Dec. 2-6—Exposition of Chemical Industries, New York Coliseum.

Dec. 3-4—Iowa State College Fertilizer Manufacturer's Conference and Fertilizer Dealers' Short Course, Memorial Union, Iowa State College campus, Ames, Ia.

Dec. 4-5—Twelfth Annual Hybrid Corn Industry-Research Conference, La Salle Hotel, Chicago, Ill.

Dec. 4-6—Soil Science Society of Florida, Annual Meeting, Fertilizer Symposium on Dec. 5, University of Florida, Gainesville.

Dec. 5—Second Annual New Mexico Irrigation Exposition, Eastern New Mexico Fairgrounds, Roswell, N.M.; Al W. Woodburn and William Harr, c/o Southwest Public Service Co., Roswell, co-chairmen.

Dec. 5—Southwest Irrigation Management Exposition, Eastern New Mexico Fairgrounds, Roswell, N.M.

Dec. 6—Eighth Annual Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Dec. 8-12—Vegetable Growers Association of America convention, Jung Hotel, New Orleans, La.

Dec. 9—Soils and Fertilizer Short Course, St. Paul Campus, University of Minnesota.

Dec. 9-12—Chemical Specialties Manufacturers Assn., Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-12 — North Central Weed Control Conference, 14th Annual Meeting, Hotel Savory, Des Moines, Iowa. Lyle A. Derscheid, agronomy department, South Dakota State College, Brookings, Program Chairman.

Dec. 11-13 — Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Dec. 12-13—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Tenn.

Dec. 18-19—Shell Nematology Workshop, Drayton Hall, University of South Carolina, Columbia, S.C.

Dec. 19-20—Missouri Soil Fertility Short Course, University of Missouri, Columbia, Mo.

1958

Jan. 7-8—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 8-10—Northeastern Weed Control Conference, Hotel New Yorker, New York, R. J. Aldrich, Rutgers University, New Brunswick, N.J., Secretary.

Jan. 9-10—Mississippi Insect Control Conference, State College, Miss.

Jan. 13-14—National Cotton Council of America, twentieth annual meeting, Westward Ho Hotel, Phoenix, Ariz.

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, Joint meeting, Peabody Hotel, Memphis, Tenn.

Jan. 14-15—Georgia Plant Food Educational Society, Annual Meeting, University of Georgia, Athens, Ga., Fielding Reed, 710 Mortgage Guarantee Bldg., Atlanta, Ga., Secretary-Treasurer.

Jan. 14-16—Nebraska Fertilizer, Machinery and Chemical Exposition, Sponsored by the Nebraska Fertilizer Institute with the Nebraska College of Agriculture, Pershing Auditorium, Lincoln, Neb.

Jan. 20-21—Pest-O-Rama, sponsored by the Alabama Association for Control of Economic Pests, Coliseum, Montgomery, Ala., W. G. Eden, P.O. Box 626, Montgomery, Ala., Secretary-Treasurer.

Jan. 21-22—North Carolina Pesticide School, College Union Bldg., North Carolina State College, Raleigh.

Jan. 21-22—Illinois Fertilizer Industry Conference, University of Illinois, Urbana, Ill.

Jan. 21-23—California Weed Conference, San Jose, Cal.

Jan. 22—Oregon Fertilizer Dealers Day, Oregon State College, Corvallis, Ore.

Jan. 22-23—Northwest Agricultural Chemicals Industry conference, Hotel Benson, Portland, Ore. (In connection with N.W. Vegetable Insect Conference and Western Cooperative Spray Project.)

Jan. 23-24—Tenth Illinois Custom Operators School, University of Illinois, Urbana.

Jan. 30-31—Colorado Agricultural Chemicals Assn., Annual Meeting, Cosmopolitan Hotel, Denver.

Feb. 4-6—North Carolina Pest Control Operators' Short Course, College Union, Raleigh, N.C. Clyde F. Smith, Dept. of Entomology, N.C. State College, secretary.

Feb. 10-11 — Southwestern Branch, Entomological Society of America, annual meeting, Shamrock Hilton Hotel, Houston, Texas.

Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

Feb. 20-22—Nitrogen Conference, University of Minnesota, St. Paul. M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn., Chairman.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

June 9-11—Association of Southern Feed & Fertilizer Control Officials, Heart of Atlanta Motel, Atlanta, Ga., Bruce Poundstone, University of Kentucky, Lexington, Ky., Secretary-Treasurer.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

Oregon Supply Firm Adjudged Bankrupt

PORTLAND, ORE. — The Western Seed & Grain Co., Inc., of Halsey, Ore., was adjudged bankrupt Nov. 19, by U.S. Judge Gus Solomon. The voluntary bankruptcy petition estimated debts at more than $150,000 and assets less than $50,000. Max Elder, Jr., vice president of the company and signer of the petition, said that detailed listing of assets and liabilities will be submitted to the court clerk within a few days.

Trade sources estimated total indebtedness of the company could exceed $300,000. Creditors of the seed and grain company include fertilizer manufacturers, seed and grain producers, country grain dealers and farm suppliers. Western Seed & Grain Co., Inc., was organized a little over a year ago with a warehouse at Halsey, doing a general grain, feed and fertilizer business.

Wisconsin University Appoints Entomologists

MADISON, WIS.—Three new appointments have been made recently by the department of entomology, University of Wisconsin. These include Dr. Harry C. Coppel, assistant professor in biological control of forest insects; Dr. John M. Wright, assistant professor in agricultural extension, and Dr. Dale M. Norris, Jr., assistant professor in research on insect transmission of Dutch elm disease.

Dr. Coppel holds degrees from the Ontario Agricultural College at Guelph, the University of Wisconsin, and the New York State College of Forestry, Syracuse.

Dr. Wright, a native of Utah, holds degrees from the University of Utah and the University of Illinois; and Dr. Norris holds degrees from Iowa State College, Ames.

Rail Line Started

GEORGETOWN, IDAHO — With most of the material distributed along the right-of-way for the 9½ miles of railroad lines from here to the plant site of Central Farmers Fertilizer Co. at Soda Springs, actual construction work has begun. B. H. Samuel & Sons, Portland, Ore., has the contract for building the railroad line to the phosphate rock and calcium metaphosphate manufacturing plant in Georgetown Canyon.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $10 per column inch.

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FOR SALE—ROTARY DRYER 9'x48'; ALSO rotary cooler 7'x44'4". Write for complete descriptions. Also entertaining offers for remainder of damaged plant structure suitable for construction of good storage warehouse. Contact Ted B. Schultz, Asst. General Manager, Peavey Elevators, 809 Grain Exchange, Minneapolis 15, Minn.

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CHAMPION GRASSMAN

PORTLAND, ORE. — Walter L. Mezger, who runs a 34-cow purebred Guernsey herd on 29 acres near Chehalis in Lewis County, has been selected as the 1957 Washington "Grassman of the Year," it was announced by the Portland Chamber of Commerce here. The 29-acre farm located near Adna is very intensively farmed. Through the use of good grass-legume seeding, adequate fertilizer applications and rotational grazing, the farm produces all the pasture, silage and nearly half the hay for the 34 animals. In 1956, Mr. Mezger's gross returns from the sale of Grade A milk represented $370 per acre. Mr. Mezger becomes a candidate for the Pacific Northwest "Grassman of the Year" title and $750 cash award provided by R. M. Wade & Co., Portland irrigation equipment manufacturer.

INDEX OF ADVERTISERS

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Allied Chemical & Dye Corp., Nitrogen Division
American Potash & Chemical Corp.
Ashcraft-Wilkinson Co. 2, 19
Anco Manufacturing & Supply Co.

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Bemis Bro. Bag Co.
Blue, John, Co.
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Chase Bag Co. 2
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Dallas Tank Mfg. Co.
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Dow Chemical Co.
E. I. du Pont de Nemours & Co., Inc.
Duval Sulphur & Potash Co. 19

Escambia Chemical Corporation 2

Flexo Products, Inc.

Gates Rubber Co.
Grace Chemical Co.

Harshaw Chemical Co.
Henderson Mfg. Co.
Hercules Powder Co.
Hough, Frank H., Co.

International Minerals & Chemical Corp. ... 7

Johns-Manville Corp.

Kent, Percy, Bag Co.
Kraft Bag Corp.

Merck & Co.
Meredith Publishing Co.
Meyer, Wilson & Geo., & Co.
Miller Publishing Co., The
Mississippi River Chemical Co.
Monsanto Chemical Co. 17

National Distillers & Chemical Corp.
National Potash Co.
Naugatuck Chemical Div., U. S. Rubber Co.
Nitrogen Div., Allied Chemical & Dye Corporation
Northwest Nitro-Chemicals, Ltd.

Olin Mathieson Chemical Corp.

Pacific Coast Borax Co.
Penick, S B., & Co.
Pennsalt of Washington Div. of Pennsalt Chemicals Corp.
Phillips Chemical Co. 8
Potash Company of America 3

Raymond Bag Co. 6

Shell Chemical Corp.
Sinclair Chemicals, Inc.
Smith-Rowland Co., Inc. 21
Sohio Chemical Co.
Southern Nitrogen Co. 18
Spencer Chemical Co. 13
Spraying Systems Co.
Stewart-Warner Corp.
Successful Farming

Tennessee Corp.

Union Bag-Camp Paper Corp. 4
U. S. Industrial Chemicals, Inc.
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